

A1-F18AC-SRM-220

1 August 1999

Change 1 – 1 August 2002

TECHNICAL MANUAL

ORGANIZATIONAL, INTERMEDIATE, AND DEPOT MAINTENANCE

STRUCTURE REPAIR FORWARD FUSELAGE

**NAVY MODEL
F/A-18A AND F/A-18B
161353 AND UP**

N00140-93-D-AC68

This volume is one of four volumes and is incomplete without A1-F18AC-SRM-221, A1-F18AC-SRM-222 and A1-F18AC-SRM-223.

This volume contains WP001 00 thru WP006 03.

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NATEC ELECTRONIC MANUAL

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Page A

NUMERICAL INDEX OF EFFECTIVE WORK PACKAGES/PAGES

List of Current Changes

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Change 1 1 Aug 2002

Only those work packages/pages assigned to the manual are listed in this index. Insert Change 1, dated 1 August 2002. Dispose of superseded and deleted work packages/pages. Superseded and deleted classified work packages/pages shall be destroyed in accordance with applicable regulations. If changed pages are issued to a work package, insert the changed pages in the applicable work package. The portion of text affected in a change or revised work package is indicated by change bars or the change symbol "R" in the outer margin of each column of text. Changes to illustrations are indicated by pointing hands or change bars, as applicable.

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NOTICE

NOTICE

A1-F18AC-SRM-220

2 August 2002

A1-F18AC-SRM-220, CHANGE 1, DATED 1 AUGUST 2002, WAS PRINTED WITHOUT DECIMALS AND PERIODS. PLEASE REMOVE AND DISCARD PREVIOUSLY PROVIDED PAGES AND REPLACE WITH THE ATTACHED CORRECTED COPY.

PLACE THIS NOTICE SHEET BEHIND MANUAL TITLE PAGE AFTER COMPLETING REQUIRED ACTION.

NOTICE

NOTICE

LIST OF TECHNICAL PUBLICATION DEFICIENCY REPORTS INCORPORATED
ORGANIZATIONAL, INTERMEDIATE, AND DEPOT MAINTENANCE
STRUCTURE REPAIR
FORWARD FUSELAGE

1. The TPDRs listed below have been incorporated in this issue.

**REPORTING ACTIVITY/
REPORT CONTROL NO.**

LOCATION

65886-01-0259

WP 005 02, pgs. 65, 68, 69

WARNINGS APPLICABLE TO HAZARDOUS MATERIALS

Warnings for hazardous materials listed in this manual are designed to warn personnel of hazards associated with such items when they come in contact with them by actual use. Additional information related to hazardous materials is provided in OPNAVINST 5100.23, Navy Occupational Safety and Health (NAVOSH) Program Manual, NAVSUPINST 5100.27, Navy Hazardous Material Control Program, and the DoD 6050.5, Hazardous Materials Information System (HMIS) series publications. For each hazardous material used within the Navy, a Material Safety Data Sheet (MSDS) is required to be provided and available for review of users. Consult your local safety and health staff concerning any questions on hazardous chemicals, MSDS's, personal protective equipment requirements and appropriate handling and emergency procedures and disposal guidance.

Complete warnings for hazardous materials referenced in this manual are identified by use of an icon, nomenclature and specification or part number of the material, and a numeric identifier. The numeric identifiers have been assigned to the hazardous materials in the order of their appearance in the manual. Each hazardous material is assigned only one numeric identifier. Repeated use of a specific hazardous material references the numeric identifier assigned at its initial appearance.

In the text of the manual, the caption WARNING will not be used for hazardous materials. Such warnings will be identified by an icon and numeric identifier. The material nomenclature will also be provided. The user is directed to refer to the corresponding numeric identifier listed below for the complete warning applicable to the hazardous materials.

Biological



Fire



Chemical



Poison



Explosion



Radiation



Eye Protection



Vapor



EXPLANATION OF HAZARDOUS SYMBOLS



The abstract symbol bug shows that a material may contain bacteria or viruses that present a danger to your life or health.



The symbol of drops of a liquid onto a hand shows that the material will cause burns or irritation of human skin or tissue.



The rapidly expanding symbol shows that the material may explode if subjected to high temperatures, sources of ignition, or high pressure.



The symbol of a person wearing goggles shows that the material will injure your eyes.



The symbol of a flame shows that a material can ignite and burn you.



The symbol of a skull and crossbones shows that a material is poisonous or is a danger to life.






















The symbol of three circular wedges shows that the material emits radioactive energy and can injure human tissue or organs.

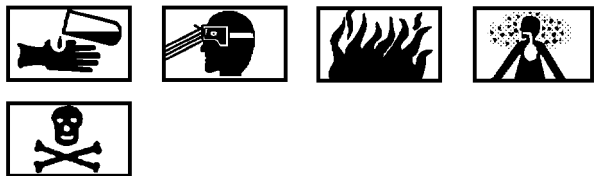
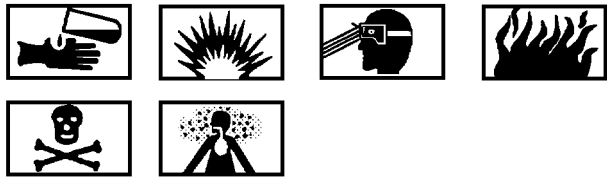



The symbol of a human figure in a cloud shows that vapors of a material present a danger to your life or health.














HAZARDOUS MATERIALS WARNINGS

Index	Material	Warning
1	Adhesive, EA 956	Adhesive, EA 956, is toxic and flammable. Avoid contact with skin and eyes. Use in well ventilated area and avoid breathing vapors. Wash hands thoroughly after each use. Close container after usage. Store in a cool, dry, and well ventilated area. Avoid contact with strong oxidizing agents. Protection: rubber gloves, chemical resistant goggles, and protective skin compound; respirator with organic vapor cartridge required in poorly ventilated areas.
	    	
2	Isopropyl Alcohol, TT-I-735	Isopropyl Alcohol, TT-I-735, is toxic and flammable. Do not use near open flames, near welding areas, or on hot surfaces. Do not smoke when using it and do not use it where others are smoking. Inhalation of vapors can cause drowsiness, dizziness, and headache. Contact of liquid with skin may cause dermatitis and irritation. If any liquid contacts skin or eyes, immediately flush affected area thoroughly with water. Remove solvent-saturated clothing. If vapors cause drowsiness, go to fresh air. When handling large quantities (greater than one gallon), work at air-exhausted workbench or covered tank. Store solvent and dispose of liquid-soaked clothes in approved metal safety container. Metal containers of liquid must be grounded to maintain electrical continuity. Protection: chemical resistant goggles, gloves, and good ventilation (or respirator).
	    	
3	Rubber Primer, SS-4004	Silicone (Rubber) Primer, SS-4004, is toxic and flammable; it irritates the eyes and skin, and vapors may cause headaches, dizziness, and nausea. Avoid heat, sparks, and open flames. Protection: gloves, chemical resistant goggles, and adequate ventilation; respirator not required unless normal ventilation is inadequate.
	     	
4	Sealing Compound, RTV-88	Sealing Compound, RTV-88, is a skin and eye irritant and may also be a mild respiratory irritant in its uncured state. Protection: safety glasses, cloth gloves, and adequate ventilation. Keep adhesive off skin and eyes. Do not ingest. Ensure good personal hygiene prior to eating, drinking, or smoking.
	  	












HAZARDOUS MATERIALS WARNINGS (Cont)

Index	Material	Warning
5	Methyl Ethyl Ketone, TT-M-261	Methyl Ethyl Ketone (MEK), TT-M-261, is toxic and flammable. Do not use near open flames, near welding areas, or on hot surfaces. Do not smoke when using it, and do not use it where others are smoking. Keep container tightly closed. Avoid contact with skin or eyes. Contact with liquid or vapor can cause skin irritation, dermatitis, and drowsiness. If there is any prolonged skin contact, wash contacted area with soap and water. Remove solvent-saturated clothing. If vapors cause drowsiness, go to fresh air. If irritation persists, get medical attention. When handling liquid at air-exhausted workbench, wear approved gloves, goggles, and long sleeves. When handling liquid or liquid-soaked cloth in open unexhausted area, wear approved respirator, gloves, and goggles. Dispose of liquid-soaked rags in approved metal container. Metal containers of solution must be grounded to maintain electrical continuity.
		
6	Cleaning Solvent, MIL-C-38736	Cleaning Solvent, MIL-C-38736, is toxic and flammable; it irritates skin, nose, throat, and respiratory tract. Avoid repeated/prolonged contact. Avoid heat, sparks, flames, and strong oxidizing agents. Keep away from open flames or other sources of ignition. Keep container tightly closed. Use only in well ventilated areas. Protection: chemical resistant gloves, chemical goggles; faceshield and protective clothing required when splashing is possible or expected; fullface atmosphere supplying respirator with organic vapor cartridge required in poorly ventilated areas.
		
7	Sealing Compound, MIL-S-83430, Class A-1/2 or B-4	Sealing Compound, MIL-S-83430, Class A-1/2 or B-4, is flammable and toxic to eyes, skin, and respiratory tract. Prolonged overexposure via inhalation may cause liver and/or kidney damage. Protection: Chemical splashproof goggles and solvent resistant gloves. Keep compound off skin and eyes. Keep away from open flames or other sources of ignition. Use only in well ventilated areas. Ensure good personal hygiene prior to eating, drinking, or smoking.
		




















HAZARDOUS MATERIALS WARNINGS (Cont)

Index	Material	Warning
8	Adhesive, R35	Adhesive, R35, is a skin and eye irritant and may also be a mild respirator irritant in its uncured state. Protection: Safety glasses, cloth gloves, and adequate ventilation. Keep adhesive off skin and eyes. Do not ingest. Ensure good personal hygiene prior to eating, drinking, or smoking.
	  	
9	Adhesive, RTV Silicone, 3145 RTV Gray	Uncured adhesive, RTV Silicone, 3145 RTV Gray, can irritate eyes. If contact with eyes occurs, flush immediately with water for 15 minutes and seek medical attention. Individuals who wear contact lenses should thoroughly wash hands prior to handling lenses. Adhesive/sealant may be harmful if swallowed. If skin contact occurs, wipe with dry cloth, then wash with soap and water.
10	Methyl Isobutyl Ketone (MIBK), TT-M-213, D1153	Methyl Isobutyl Ketone (MIBK), TT-M-213, D1153, is toxic, flammable, and irritating to eyes and skin. Overexposure may cause dizziness, narcosis, nausea, and vomiting. Do not use in confined areas. Protection: chemical splashproof goggles, gloves, and good ventilation. Keep container closed. Keep sparks, flames, and heat away. Keep MIBK off skin, eyes, and clothes. Do not breathe vapors. Use of respiratory protection may be required, depending on work task(s) and location. Ensure good personal hygiene prior to eating, drinking, or smoking.
	    	
11	Sealing Compound, MIL-S-81733	Sealing Compound, MIL-S-81733, is flammable and toxic and may contain chromium compounds, suspected carcinogens. Avoid contact with skin and eyes. Keep away from heat, flames, and oxidizing materials. Prolonged breathing of vapors from organic solvents, or materials containing organic solvents, is dangerous. Protection: rubber gloves, chemical resistant goggles, and protective skin cream; use of a respirator with organic vapor cartridge is advised in poorly ventilated areas. Wash hands thoroughly with soap and water before eating, drinking, or smoking. Contains chromates; follow approved toxic waste disposal procedures.
	    	

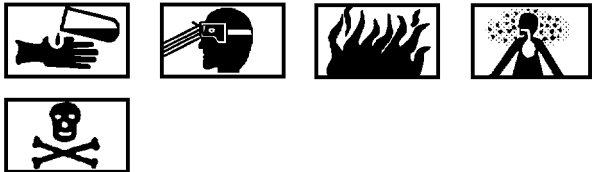
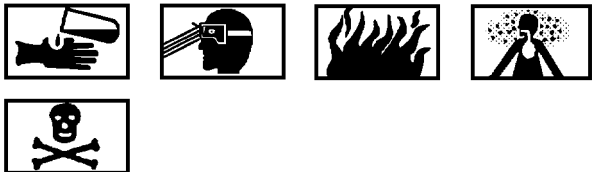
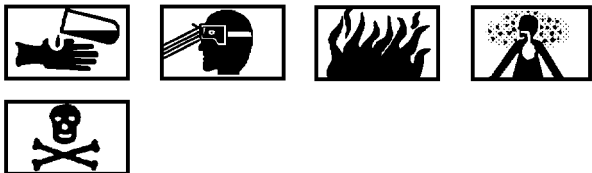
HAZARDOUS MATERIALS WARNINGS (Cont)

Index	Material	Warning
12	Adhesive, RTV-106	Adhesive, RTV-106, is a skin and eye irritant and may also be a mild respiratory irritant in its uncured state. Protection: safety glasses, cloth gloves, and adequate ventilation. Keep adhesive off skin and eyes. Do not ingest. Ensure good personal hygiene prior to eating, drinking, or smoking.
	  	
13	Corrosion Preventive Compound, MIL-C-85054	Corrosion Preventive Compound, MIL-C-85054, is toxic and flammable. Keep it away from heat, sparks, and open flames. Do not smoke when using it. Use in a well ventilated area. Inhalation of vapors is harmful. Wear rubber gloves, chemical goggles (or face shield), and protective neoprene apron. If splashed on clothing or in eyes, remove clothing immediately and flush skin/eyes with clear water for 15 minutes. If vapors cause lightheadedness, go to fresh air. If liquid is swallowed, do not try to vomit. Get prompt medical attention. Keep away from spillage. Use absorbant to soak up spilled solution. Dispose of absorbant in accordance with local, state, and federal regulations. Keep solution away from oxygen and strong oxidants. Store in approved metal safety container. Keep containers closed when not in use.
	   	
14	Plastic Cleaner	Plastic polish, P-P-560, is combustibile and may cause slight skin irritation. Protection: chemical resistant goggles. Ensure good personal hygiene prior to eating, drinking, or smoking. Manufacturers' hazards may vary. Always consult proper MSDS.
	   	

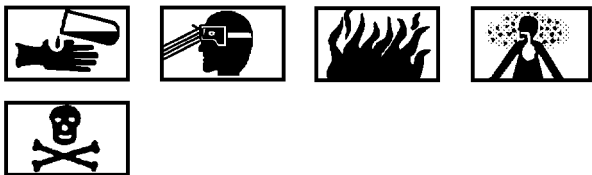

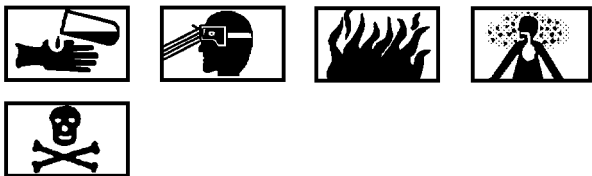

HAZARDOUS MATERIALS WARNINGS (Cont)

Index	Material	Warning
15	Abrasive Cream, Micro Gloss	Abrasive cream, Micro Gloss, is a skin and eye irritant. Avoid contact with skin and eyes. Do not ingest. Use of eye protection and gloves is recommended.
	  	
16	Anti Static Cream, 3MASC8	Anti Static Cream, 3MASC8, is a skin and eye irritant. Avoid contact with skin and eyes. Do not ingest. Use of eye protection and gloves is recommended.
	  	
17	Adhesive, EA9321A/B	Adhesive, EA9321A/B, is toxic and flammable. Avoid contact with skin and eyes. Use in well ventilated area and avoid breathing vapors. Wash hands thoroughly after each use. Close container after usage. Store in a cool, dry, and well ventilated area. Avoid contact with strong oxidizing agents. Protection: rubber gloves, chemical resistant goggles, and protective skin compound; respirator with organic vapor cartridge required in poorly ventilated areas.
	    	
18	Cleaning Compound, PR146 Blue	Cleaning Compound, PR146 Blue, is toxic to skin, eyes, and respiratory tract. Skin and eye protection required. Avoid repeated or prolonged contact. Good general ventilation is normally adequate.
	  	
19	Adhesive Primer, PR142	Adhesive Primer, PR142, is highly flammable and toxic. Do not use near open flame or sparks. Use only in well ventilated areas.
	    	

HAZARDOUS MATERIALS WARNINGS (Cont)

Index	Material	Warning
20	Sealing Compound, PR-1725, B2	Sealing Compound, PR-1725, B2, is toxic and flammable. Keep sealant off skin, eyes, and clothes. Keep away from sparks, heat, and open flames. Do not breathe vapors. Keep container closed. Protection: chemical resistant goggles, gloves, and good ventilation. Ensure good personal hygiene prior to eating, drinking, or smoking.
		
21	Adhesive Compound, EA960F	Adhesive Compound, EA960F, is composed of resins and hardness or curing agents that contain toxic ingredients that can cause irritation to eyes, skin, or respiratory tract. It is toxic and flammable. If adhesive contacts eyes, flush immediately with large quantities of water and seek medical attention. If it contacts skin, wash thoroughly with soap and water. Prolonged or repeated contact may cause allergic reaction in susceptible persons. Use only with adequate ventilation. Wash hands thoroughly after handling. Do not inhale vapors during curing. If spilled on clothing, wash clothes before wearing again. Close container after usage. Store in a cool, dry, and well ventilated area. Avoid contact with strong oxidizing agents. If spilled completely clean up area of spillage. Incinerate properly in accordance with local regulations. Protection: rubber gloves, chemical resistant goggles, and protective skin compound; respirator with organic vapor cartridge required in poorly ventilated areas.
		
22	Quickset Plastic, RP1710	Quickset Plastic, RP1710, is flammable and an irritant to skin, eyes, and respiratory tract. Keep away from heat and open flames. Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Avoid breathing vapors or mist.
		

HAZARDOUS MATERIALS WARNINGS (Cont)

Index	Material	Warning
23	Quickset Plastic Hardener, RP1135	Quickset Plastic Hardener, RP1135, is flammable and an irritant to skin, eyes, and respiratory tract. Keep away from heat and open flames. Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Avoid breathing vapors or mist.
		
24	Sealing Compound, MIL-S-22473, Grade D	Sealing Compound, MIL-S-22473, Grade D, is a skin and eye irritant and is combustible. Do not use near open flames, near welding areas, or on hot surfaces. Prolonged or repeated contact with liquid can cause dermatitis and irritation of skin. Repeated inhalation of vapor can cause liver and kidney damage. If any liquid contacts skin or eyes, immediately flush affected area thoroughly with water. Remove solvent-saturated clothing. If vapors cause irritation, go to fresh air. When handling liquid at air-exhausted workbench, wear approved gloves and goggles or face shield. When handling liquid at unexhausted workbench, wear approved respirator and gloves, and wear goggles or face shield. Dispose of liquid-soaked rags in approved metal container.
		
25	Lubricant, Dry Film, MIL-L-46147	Lubricant, Dry Film, MIL-L-46147, is toxic and flammable. Avoid contact with skin and eyes. Do not inhale vapors or mist. Wash hands thoroughly after each use; contains small amounts of lead, which is poisonous. Keep away from heat, sparks, and flame; vapors can flow to ignition sources and flash back. Avoid contact with oxidizers and strong acids. Store in a cool, dry area. Protection: rubber gloves and chemical goggles.
		
26	Adhesive, EA934	Adhesive, EA934, is toxic. Avoid breathing vapors. Avoid contact with skin or eyes. Wear gloves and goggles while handling. If eye contact is made, wash immediately with large amount of water. If skin contact is made, wash immediately with soap and water.
		

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ORGANIZATIONAL, INTERMEDIATE AND DEPOT MAINTENANCE

STRUCTURE REPAIR

FORWARD FUSELAGE

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25	033 00
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Fence	039 00
Installation	041 01
Position Light (7DSM007)	039 00
Removable Covers	039 00
Removal	041 01
Skins	039 00
Structure, Aft	041 00
Structure, Forward	040 00
Leading Edge Extension, Right	
Fence	039 01
Installation	041 01
Removable Covers	039 01
Removal	041 01
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Liners	
Aft Cockpit	031 00
Cockpit	030 00
Longerons	
Forward Fuselage	021 00
Nose Barrel	010 00
Main Instrument Panel	
Cockpit	026 00
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Maintenance Fixture, RE174313211, Loading Gun Bay Access Door (Door 3)	013 01
Door 3 Component Replacement	013 02
Maintenance Fixture, RE174030301-1 Left Leading Edge Extension	052 00
Maintenance Fixture, RE174200011-1 Right Leading Edge Extension	053 00
Maintenance Fixture, RE174350002, Windshield	004 01
Transparency Removal, Installation and Replacement	004 03
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Maintenance Fixture, RE174350004, Loading F/A-18A Canopy	005 01
Canopy Component Replacement	005 02
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Maintenance Fixture, RE174350006, Loading F/A-18B Canopy	006 01
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Map, Stowage Case	027 00
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Nose Landing Gear Doors	037 00
Nose Plug Sealant Repair, Radome	003 01
Panel, Main Instrument and Consoles	
Cockpit	026 00
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Plenum	025 00
Radar Set, Plate Nut and Spacer Replacement	008 00
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Boot	003 01
Environmental Seal, 74A311026, Replacement	003 02
Nose Cap	003 01
Nose Plug Sealant Repair	003 01
Receptacle Sealant Repair	003 00
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Angle Bracket, 74A314093 and 74A314701, Repair	025 00
A2641-6 Boarding Ladder Drag Brace Repair	039 00
Door 3 Fastener Hole Repair	013 00
Door 3 Longeron Fastener Hole Repair	010 00
Door 5 and 8 Sill Repair	008 00
Door 6 Hinge Pin Repair	035 01
Door 9 Sill Repair	017 00
Door 18 Forward Corner Damage Repair	035 00
EMI Strips, Radar Set	009 00
Environmental Seal, 74A311026, Radome	003 02
F/A-18A Canopy Actuator Support Fastener Repair	018 00
F/A-18A Canopy Edging Strip Repair	005 00
F/A-18A Canopy Transparency Polishing	005 00
F/A-18B Canopy Actuator Support Fastener Repair	025 00
F/A-18B Canopy Edging Strip Repair	006 00
F/A-18B Canopy Transparency Polishing	006 00
Fiberglass and Aramid Component Repair	038 00
Radome Boot and Nose Cap	003 01
Radome Environmental Seal	003 02
Radome Nose Plug Sealant Repair	003 01
Radome Receptacle Sealant Repair	003 00
Radome Shell	003 00
Windshield Center Attach Support, 74A350610	018 00

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Windshield Transparency Polishing	004 00
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74A314092 Bulkhead Broken Tab Repair	025 00
74A314093 Angle Bracket Repair	025 00
74A314108 Cover (EMI Shield) Repair	036 00
74A314656 Plate Repair for Cabin Pressurization Loss	019 00
74A314701 Angle Bracket Repair	025 00
74A800664 Cockpit Insulation Blanket Repair	030 00
74A802608 Aft Cockpit Insulation Blanket Repair	031 00
Screen, EMI Shield, F/A-18A	036 00
Shell, Radome	003 00
Shelves	022 00
Skin	
Forward Fuselage	017 00
Left Leading Edge Extension	039 00
Nose Barrel	007 00
Right Leading Edge Extension	039 01
Stowage and Map Case	027 00
Strain Gages	021 01
Structure	
Canopy, F/A-18A	005 00
Canopy, F/A-18B	006 00
Forward Fuselage	018 00
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Transparency Removal, Installation, and Replacement, Canopy, F/A-18B	006 03
Transparency Removal, Installation, and Replacement, Windshield	004 03
Trough, IFR	011 00
Webs	023 00
Windshield	004 00
Acrylic Transparency	004 00
Center Attach Support, 74A350610	018 00
Maintenance Fixture, RE174350002	004 01
Structure	004 00
Transparency Removal, Installation, and Replacement	004 03
Windshield Component Replacement	004 02

ORGANIZATIONAL, INTERMEDIATE, AND DEPOT MAINTENANCE

STRUCTURE REPAIR

STRUCTURE GROUP INDEX

Reference Material

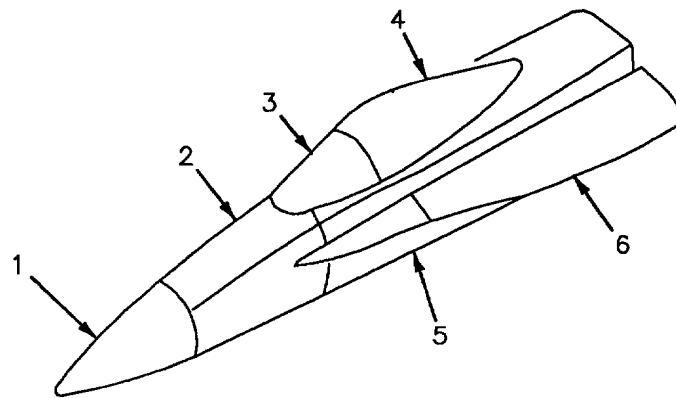
None

Alphabetical Index

Subject	Page No.
Description	1
Forward Fuselage Group Index, Figure 1	2

1. DESCRIPTION.

2. Figure 1 shows main components of forward fuselage and where they are located in the manual.



ITEM	NOMENCLATURE	PART NUMBER	WORK PKG. NO.
1	RADOME RADOME BOOT AND NOSE CAP SHELL STRUCTURE	74A311000	003 01 003 00 003 02
2	NOSE BARREL BULKHEADS AND FRAMES DOOR 3 EXTERNAL DOORS IFR TROUGH STRUCTURE INTERNAL DOORS LONGERONS AND STRINGERS SKINS STRUCTURE	74A313000	009 00 013 00 012 00 011 00 014 00 010 00 007 00 008 00
3	WINDSHIELD	74A350001	004 00
4	CANOPY F/A-18A F/A-18B	74A350003 74A350005	005 00 006 00
5	FORWARD FUSELAGE BULKHEADS, FORMERS, AND FRAMES; Y211.500 THRU Y280.500 BULKHEADS, FORMERS, AND FRAMES; Y294.000 THRU Y383.000 COMPOSITE DOORS EXTERNAL DOORS FIBERGLASS AND ARAMID COMPONENTS FLOORS AND CANOPY DECK INTERNAL DOORS, AFT COCKPIT INTERNAL DOORS, COCKPIT KEEL LONGERONS AND STRINGERS MAIN INSTRUMENT PANEL AND CONSOLES, AFT COCKPIT MAIN INSTRUMENT PANEL AND CONSOLES, COCKPIT NOSE LANDING GEAR DOORS SHELVES, SHIELD, AND PLENUM SKINS STRUCTURE WEBS	74A310000	019 00 020 00 035 00 032 00 038 00 025 00 036 01 036 00 024 00 021 00 026 01 026 00 037 00 022 00 017 00 018 00 023 00
6	LEADING EDGE EXTENSION AFT STRUCTURE FORWARD STRUCTURE LEFT SKINS AND DOORS RIGHT SKINS AND DOORS	74T303000	041 00 040 00 039 00 039 01

Figure 1. Forward Fuselage Group Index

INTRODUCTION**ORGANIZATIONAL, INTERMEDIATE, AND DEPOT MAINTENANCE****FORWARD FUSELAGE**

1. PURPOSE.

2. This manual provides damage evaluation, repair, and replacement information for structure items at organizational, intermediate, and depot levels of maintenance.

3. REQUISITION AND AUTOMATIC DISTRIBUTION OF NAVAIR TECHNICAL MANUALS.

4. Procedures to be used by Naval activities and other Department of Defense activities requiring NAVAIR technical manuals are defined in NAVAIR 00-25-100 and NAVAIRINST 5605.5.4A.

5. To automatically receive future changes and revisions to NAVAIR technical manuals, an activity must be established on the Automatic Distribution Requirements List (ADRL) maintained by the Naval Air Technical Data and Engineering Service Command (NATEC). To become established on the ADRL, notify your activity central technical publications librarian. If your activity does not have a library, you may establish your automatic distribution by contacting the Commanding Officer, NATEC, Attn: Distribution, NAS North Island, Bldg. 90, P.O. Box 357031, San Diego, CA 92135-7031. Annual reconfirmation of these requirements is necessary to remain on automatic distribution. Please use your NATEC assigned account number whenever referring to automatic distribution requirements.

6. If additional or replacement copies of this manual are required with no attendant changes in the ADRL, they may be ordered by submitting a MILSTRIP requisition in accordance with NAVSUP 485 to Routing Identifier Code "NFZ". MILSTRIP requisitions can be submitted through your supply office, Navy message, or SALTS to DAAS (Defense Automated Address Sys-

tem), or through the DAAS or NAVSUP web sites. For assistance with a MILSTRIP requisition, contact the Naval Inventory Control Point (NAVICP) Publications and Forms Customer Service at DSN 442-2626 or (215) 697-2626, Monday through Friday, 0700 to 1600 Eastern Time.

7. The date on the title page is the copy freeze date. No additions, deletions, or changes are made after the manual issue date, except last minute safety of flight or required maintenance changes. Data collected after the manual issue date is included in later changes or revisions of the manual.

8. EFFECTIVITIES.

9. Effectivity notes on manual title page, work package title pages, and within a work package indicate the aircraft to which the data applies. If no effectivity note appears on the work package title page, the work package has the same effectivity as shown on the manual title page. The effectivity notes may use:

NOTE

Aircraft with model designator F/A-18B are the same type and model as TF/A-18A.

a. Type, model, and series.

b. Bureau number (tail number).

c. Combination of type, model, series, and bureau numbers.

d. Part number or serial number.

e. Technical directive number. The table below shows examples of effectivity notes and their meanings:

Effectivity Note Examples

Effectivity Note	Definition
161362 AND UP	Applicable to all F/A-18A, F/A-18B, F/A-18C, and F/A-18D for bureau numbers listed.
F/A-18A, F/A-18B	Applicable to all F/A-18A and F/A-18B.
F/A-18C, F/A-18D	Applicable to all F/A-18C and F/A-18D.
F/A-18A	Applicable to all F/A-18A, but not F/A-18B, F/A-18C, and F/A-18D.
F/A-18B	Applicable to all F/A-18B, but not F/A-18A, F/A-18C, and F/A-18D.
F/A-18C	Applicable to all F/A-18C, but not F/A-18A, F/A-18B, and F/A-18D.
F/A-18D	Applicable to all F/A-18D, but not F/A-18A, F/A-18B, and F/A-18C.
F/A-18A, F/A-18C	Applicable to all F/A-18A and F/A-18C, but not to F/A-18B and F/A-18D.
F/A-18B, F/A-18D	Applicable to all F/A-18B and F/A-18D, but not to F/A-18A and F/A-18C.
F/A-18A 161353, 161359 THRU 161364	Only applicable to some bureau numbers of F/A-18A. Not applicable to any F/A-18B, even if a F/A-18B bureau number is within the numbers listed.
F/A-18C 163427, 163449 THRU 163456	Only applicable to some bureau numbers of F/A-18C. Not applicable to any F/A-18D, even if a F/A-18D bureau number is within the numbers listed.
F/A-18B 161354 AND UP	Only applicable to some bureau numbers of F/A-18B. Not applicable to any F/A-18A, even if an F/A-18A bureau number is within the numbers listed.
F/A-18D 163434 AND UP	Only applicable to some bureau numbers of F/A-18D. Not applicable to any F/A-18C, even if a F/A-18C bureau number is within the numbers listed.
161353 THRU 161356 BEFORE F/18 AFC 772	Applicable to F/A-18A and F/A-18B for bureau numbers listed, before modification by technical directive.
161357 AND UP; ALSO 161353 THRU 161356 AFTER F/18 AFC 772	Applicable to aircraft modified during production; also applicable when affected aircraft have been modified by technical directive.
P/N 74A210001-1001, 74A210001-1003 AND 74A210001-1005	Applicable to assemblies which are interchangeable between aircraft.

Effectivity Note Examples (Continued)

Effectivity Note	Definition
Outer Wing, Assembly Serial Number, A13-0022	Applicable to assemblies which are interchangeable between aircraft, but configurations cannot be identified by part number.

10. **TECHNICAL DIRECTIVES.**

11. Technical directives are documents which direct the accomplishment, and recording of a retrofit configuration or inspection to delivered aircraft, or aircraft components.

12. **AIRFRAME (AFC) OR SOFTWARE CONFIGURATION (ASC) CHANGES.** AFC and ASC effectivities are written the same, except only the AFTER configuration of an ASC is shown in a manual. See AFC effectivity example in Effectivity Note Example table.

13. **AIRFRAME CHANGE (AFC) AND AIRBORNE TACTICAL SOFTWARE CHANGE (ASC).** Technical directives which change configuration of aircraft structure or equipment installation, i.e. AFC, will list aircraft bureau numbers in effectivity notes and show before and after the AFC. Technical directives which change configuration of operational flight programs (OFP), i.e. ASC, will list the OFP CONFIG/IDENT NUMBER in effectivity notes and show the latest two authorized OFP programs. See AFC and ASC effectivity examples in Effectivity Note Example table.

14. **HISTORICAL RECORD/RECORD OF APPLICABLE TECHNICAL DIRECTIVES.**

15. The historical record of applicable Technical Directives is a list of all technical directives that have ever affected this manual. Current technical directives now affecting this manual are listed in the Record of Applicable Technical Directives of each work package. When a technical directives is rescinded, the entry is removed from each affected work package and entered in the Historical Record of Applicable Technical Directives.

16. **HOW TO USE THE MANUAL.**

17. Text and illustrations contained in this manual are in work package format. These work packages are complete sets of data or procedures arranged in a logical sequence supplying instructions, references, and material/equipment requirements. Work package types contained in this manual are listed below:

a. Alphabetical Index Work Package. This work package contains an alphabetical listing, by title, of

each work package contained within the manual. This work package is numbered 001 00.

b. Forward Fuselage Structure Group Index Work Package. This work package contains an illustration which indexes the location of each structure group. It contains a table listing item, nomenclature, part number and work package number, for location within the manual. This work package is numbered 001 01.

c. Introduction Work Package. This work package contains introductory information for the repair persons use. This work package is numbered 002 00.

d. Numerical Index of Effective Work Packages/Pages. This index (A Page) provides the user with the current status of the publication.

e. Specific Procedure Work Package. Specific procedure work packages are those which provide damage evaluation, repairs, and replacements for structure items. Items are indexed and identified on an illustration by nomenclature, part number, description, and material.

18. Warnings, Cautions, and Notes. Items of special importance and critical information are identified in warnings, cautions, and notes. Warnings and cautions appear immediately before the step to which they apply. Notes may appear before or after the affected step.

WARNING

Warnings describe conditions or procedures that could result in injury or death if correct procedures are not followed.

CAUTION

Cautions describe conditions or procedures that could result in damage to or destruction of equipment if correct procedures are not followed.

NOTE

Notes describe or clarify conditions or procedures.

19. TECHNICAL PUBLICATIONS DEFICIENCY REPORT (TPDR).

20. The TPDR (OPNAV FORM 4790/66) is the form for reporting errors and suspected omissions in the technical manuals. Reporting procedures are in OPNAVINST 4790.2 SERIES.

21. QUALITY ASSURANCE PROCEDURES.

22. Procedures or parts of procedures which require quality assurance inspection are identified by the letters (QA) after the applicable steps. When (QA) is assigned to a step or a heading which is immediately followed by substeps, the inspection requirement is applicable to all substeps.

23. When doing maintenance in any area, a visual inspection of the area will be made for cracks, corrosion, and security of component installation before securing the area for flight.

Historical Record of Applicable Technical Directives

Type/ Number	Date	Title and ECP No.	Date Incorp.	Remarks
F18 IAFC 055	-	L/R Vertical Stabilizers, Strengthening of (ECP 00205)	1 Jul 85	-
F18 AFC 49	-	Addition of Sealed Lead Acid Battery (ECP MDA-F18-00074)	1 Jul 86	-

ORGANIZATIONAL MAINTENANCE
STRUCTURE REPAIR**RADOME SHELL**

Reference Material

Radome Boot and Nose Cap	WP003 01
Aircraft Corrosion Control	A1-F18AC-SRM-500
Radome Finish System and Marking	WP015 00
Line Maintenance Access Doors	A1-F18AC-LMM-010
Structure Repair, General Information	A1-F18AC-SRM-200
Adhesive, Cement, and Sealant; Preparation and Application	WP011 00
Structure Repair, Typical Repair	A1-F18AC-SRM-250
Material Preparation	WP003 00
Curing of Repairs	WP004 00

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Class I Damage Repair	4
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Class II Damage Repair	6
Class III Damage Repair	7
Repair of Holes Through Wall	7
Repair of Resin Cracks Through Wall	8
Radome Receptacle Sealant	10
Replacement	11
Radome Receptacle	11

Record of Applicable Technical Directives

None

1. **DAMAGE EVALUATION.** See figure 1.**NOTE****NOTE**

A select number of 74A311001 radomes were modified to meet specific performance requirements. After IAFC 139 is incorporated, evidence of this modification in the form of a coating on inside surface of radome structure may remain but requires no maintenance.

2. The figure identifies type of material used. Locating and determining size of damage by visual method is organizational maintenance. The data shown can be used to analyze the damage.

3. **REPAIRABLE DAMAGE.** Repairable damage is damage that can be permanently repaired with no adverse affect on structural integrity, flight characteristics, or safety of the aircraft. For zoning and limits of repairable damage not requiring electrical retest, see figure 2 and table 1. For zoning and limits of repairable damage requiring electrical retest, see figure 2 and table 2. For electrical retest an Automatic Radome Test Range is required (Depot).

The need for electrical retest shall be determined by comparison of the current damage to all previously repaired damage.

For example, assume the current damage is not bad enough to require electrical retest. However, if a previous repair was done within the minimum distance to the current damage, or the current damage expands a previously repaired area outside the maximum size, then an electrical retest will be required.

4. **Class I Damage.** Damage is made up of cuts, scratches, blisters, erosions, delaminations, and loose circ windings.

5. **Class II Damage.** Damage is major surface damage.

6. **Class III Damage.** Damage is shell wall holes and resin cracks.

Table 1. Limits Of Repairable Damage Not Requiring Electrical Retest









Class of Damage 	Zone	Maximum				MIN. Distance Between Repairs (Inches)	 Total Repairable Area (SQ. Inches)
		Depth	 Length	 Width	Diameter (Inches)		
Class 1 Cuts Scratches Erosion	1	0.040	-	-	1	8	5
	2	0.040	-	-	2	4	10
	3	0.040	-	-	4	16	20
	4	0.040	-	-	2	8	10
Class 1 Delaminations	1	-	1.0	1.0	-	4	5.0
	2	-	1.0	1.0	-	4	10.0
	3	-	1.0	1.0	-	4	40.0
	4	-	1.0	1.0	-	4	14.0
Class 1 Loose Circs	All	To First Longo Windings	10	0.25	-	6	10
Class 2 Major Surface Damage	1		1.0	0.7	0.7	8	5
	2		2.0	1.4	1.4	8	8
	3		4.0	2.0	2.0	16	32
	4		-	-	-	-	Not Repairable

Table 1. Limits Of Repairable Damage Not Requiring Electrical Retest (Continued)

Class of Damage 4	Zone	Maximum				MIN. Distance Between Repairs (Inches)	1 Total Repairable Area (SQ. Inches)
		Depth	2 Length	3 Width	Diameter (Inches)		
Class 3 Holes Through Wall	1	-	-	-	0.7	8	2
	2	-	-	-	1.4	8	5
	3	-	-	-	2.1	17	21
	4	-	-	-	-	-	Not Repairable
Class 3 Resin Cracks	1	Full	3.0	5 0.25	-	4.0	-
	2	Full	3.0	5 0.25	-	4.0	-
	3	Full	3.0	5 0.25	-	4.0	-
	4	Full	2.0	5 0.25	-	8.0	-

NOTE

- 1 When more than one class of damage is repaired, the total area shall be limited by the smaller number.
- 2 Dimension in the direction of circles is the damage length.
- 3 Dimension in the direction of longos is the damage width.
- 4 See figure 2 for repair zones.
- 5 A maximum of 3 individual cracks in a cluster are permitted within a 1.0 inch span.
- 6 Depth is limited to one-half of the shell thickness.

Table 2. Limits Of Repairable Damage Requiring Electrical Retest

Class of Damage 5	Zone 1	Maximum				MIN. Distance Between Repairs (Inches)	2 Total Repairable Area (SQ. Inches)
		Depth	3 Length	4 Width	Diameter (Inches)		
Class 1 Cuts Scratches Erosion	1	0.040	-	-	2	8	13
	2	0.040	-	-	4	16	38
	3	0.040	-	-	4	16	50
	4	0.040	-	-	4	16	38
Class 1 Delaminations	1	Full	4.0	1.0	-	8	14
	2	Full	6.0	1.5	-	13	25
	3	Full	8.0	2.0	-	17	48
	4	Full	6.0	1.5	-	13	25
Class 1 Loose Circs	All	To First Longo Windings	Radome Circum- ference	1.0	-	4	20

Table 2. Limits Of Repairable Damage Requiring Electrical Retest (Continued)

Class of Damage 5	Zone 1	Maximum				MIN. Distance Between Repairs (Inches)	2 Total Repairable Area (SQ. Inches)
		Depth	3 Length	4 Width	Diameter (Inches)		
Class 2 Major Surface Damage	1	-	4.00	1.0	0.70	8	14
	2	-	6.00	1.5	2.0	12	25
	3	-	8.00	2.0	3.0	16	48
	4	-	-	-	-	-	Not Repairable
Class 3 Holes Through Shell Wall	1	-	-	-	2	8	9
	2	-	-	-	3	12	21
	3	-	-	-	4	16	38
	4	-	-	-	-	-	Not Repairable
NOTE 1 Zone 4 repairs do not require electrical retest. 2 When more than one class of damage is repaired, the total area shall be limited by the smaller number. 3 Dimension in the direction of circles is the damage length. 4 Dimension in the direction of longos is the damage width. 5 See figure 2 for repair zones.							

7. REPAIRS.

Materials Required (Continued)

8. **CLASS I DAMAGE REPAIR.** The three types of Class I repair to the radome shell are cuts and scratches, delaminations, and loose circs.

Nomenclature

Specification
or Part Number

Cheesecloth

CCC-C-440, Type 1,
Class 1

Cloth, Satin

MIL-C-9084, Type 8,
Class 2

Paper, Abrasive

A-A-1047,
Grit 180-9x11
Grit 240-9x11

9. Repair of Cuts and Scratches.

Support Equipment Required

None

Materials Required

Nomenclature

Specification
or Part Number

Adhesive

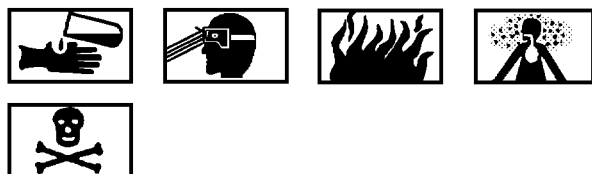
EA956

a. If damage is in zone 1, figure 2, remove rain erosion boot (WP003 01).

b. Remove residual adhesive using 180 grit abrasive paper.

c. Sand off loose circs using 180 grit abrasive paper.

d. Wipe off damaged area with clean, dry cheesecloth.



Adhesive

1

e. Prepare adhesive (A1-F18AC-SRM-250, WP003 00).

f. Saturate cloth with adhesive.

g. Lay up cloth in repair area until repair plies are 0.010 above laminate surface.

h. Cure repair (A1-F18AC-SRM-250, WP004 00).

NOTE

Repair area that is not flush may degrade radar performance.

i. After cure, sand repaired area flush using number 240 grit abrasive paper.

j. Refinish repair area (A1-F18AC-SRM-500, WP015 00).

k. If boot was removed, install new boot (WP003 01).

10. Repair of Delaminations.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Needle, Hypodermic	-
Syringe, Hypodermic, 3CC	-

Materials Required

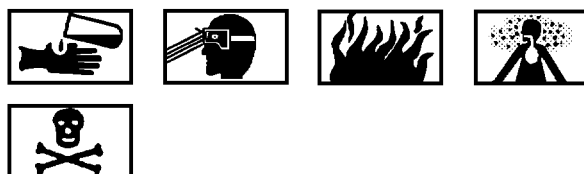
Nomenclature

Specification or Part Number

Adhesive
Cheesecloth

EA956
CCC-C-440, Type 1,
Class 1

a. Drill a 3/32-inch diameter hole at each end of delaminated area. Drill to depth required to reach delaminated ply.



Adhesive

1

b. Prepare adhesive (A1-F18AC-SRM-250, WP003 00).

c. Inject adhesive, using a hypodermic syringe and needle, into one of the holes until adhesive flows out the other hole.

d. Apply slight hand pressure and bring delaminated area down to correct thickness by working the excess adhesive from between the layers of laminate.

e. Using a clean cheesecloth, wipe off excess adhesive.

f. Cure repair (A1-F18AC-SRM-250, WP004 00).

g. Refinish repair area (A1-F18AC-SRM-500, WP015 00).

11. Repair of Loose Circs.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Squeegee	-

Materials Required

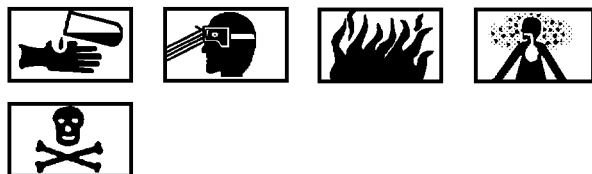
Nomenclature	Specification of Part Number
Adhesive	EA956
Cheesecloth	CCC-C-440, Type 1, Class 1
Fiberglass	713-450-NT-37.5
Film, Plastic	200SG40TR
Paper, Abrasive	A-A-1047, Grit 180-9x11 Grit 240-9x11

a. If damage is in zone 1, figure 2, remove rain erosion boot (WP003 01).

b. Remove residual adhesive using 180 grit abrasive paper.

c. Sand off loose circs using 180 grit abrasive paper.

d. Wipe off damaged area with a clean, dry cheesecloth.



Adhesive

1

e. Prepare adhesive (A1-F18AC-SRM-250, WP003 00).

f. Saturate fiberglass with adhesive.

g. Lay up fiberglass in the repair area in the direction of the existing circs.

h. Cover repair with plastic film and use squeegee to remove any air bubbles.

i. Cure repair (A1-F18AC-SRM-250, WP004 00).

j. After cure, sand repair area until smooth using number 240 grit abrasive paper.

k. Refinish repair area (A1-F18AC-SRM-500, WP015 00).

l. If boot was removed, install new boot (WP003 01).

12. **CLASS II DAMAGE REPAIR.** Class II is repair of major shell surface damage. See figure 3.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Squeegee	-

Materials Required

Nomenclature	Specification or Part Number
Adhesive	EA966
Cheesecloth	CCC-C-440, Type 1, Class 1
Cloth, Satin	MIL-C-9084, Type 8, Class 2 Type 3, Class 2
Film, Plastic	200SG40TR
Paper, Abrasive	A-A-1047, Grit 180-9x11 Grit 240-9x11
Tape, Pressure Sensitive	A-A-883, Type 1, 1 inch

a. If damage is in zone 1, figure 2, remove rain erosion boot (WP003 01).

b. Remove residual adhesive using 180 grit abrasive paper.

c. Wipe off damaged area with clean, dry cheesecloth.

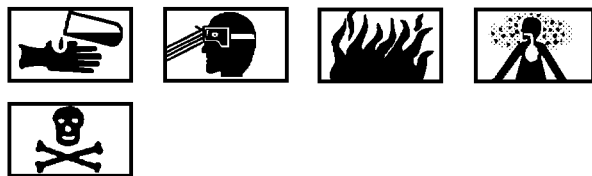
d. Mask off area around damage with pressure sensitive tape. Area should be about 2 inches larger than the damage.



Avoid jagged cuts or sharp corners as a fatigue crack may result.

e. Remove successive layers of damaged material in an oval pattern. Each layer of damaged material removed should be 1/2 to 3/4 inch smaller than the one before. Use care to remove only damaged material.

f. If moisture is present, dry repair area.



Adhesive

1

g. Prepare adhesive (A1-F18AC-SRM-250, WP003 00).

NOTE

Each layer of cloth will lay up to about 0.010 thick.

h. Cut cloth pieces to fit each step. Warp of cloth should be in the circumferential direction of the radome.

i. Impregnate cloth pieces with adhesive. Weight of adhesive required is about 75 percent of the weight of the cloth.

j. Lay impregnated cloth in cavity starting with smallest piece. Warp of cloth should be in the circumferential direction of the radome. Finished lay-up should be up to 0.020 inches above mold line.

k. Cover repair area with plastic film and use squeegee to remove any entrapped air.

l. Cure repair (A1-F18AC-SRM-250, WP004 00).

m. After cure, sand excess adhesive with number 180 grit abrasive paper. Sand to a smooth finish using number 240 grit abrasive paper.

n. Wipe off sanding dust with clean, dry cheesecloth.

o. Refinish repair area (A1-F18AC-SRM-500, WP015 00).

p. If boot was removed, install new boot (WP003 01).

13. **CLASS III DAMAGE REPAIR.** The two types of Class III repair to the radome shell are repair of holes through wall and repair of resin cracks through wall.

14. **Repair of Holes Through Wall.** See figure 4.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Squeegee	-

Materials Required

Nomenclature	Specification or Part Number
Adhesive	EA956
Cheesecloth	CCC-C-440, Type 1, Class 1
Cloth, Satin	MIL-C-9084, Type 8, Class 2 Type 3, Class 2
Film, Plastic	200SG40TR
Paper, Abrasive	A-A-1047, Grit 180-9x11 Grit 240-9x11

a. If damage is in zone 1, figure 2, remove rain erosion boot (WP003 01).

b. Remove residual adhesive using 180 grit abrasive paper.

c. Wipe repair area clean with clean, dry cheesecloth.

d. Mark outline of damaged area to be removed in a circular or oval pattern. A minimum amount of undamaged material should be removed.



Avoid jagged cuts or sharp corners, as a fatigue crack may result. Do not cut into undamaged longos when cutting away damaged circs; do not cut into undamaged circs when cutting away damaged longos.

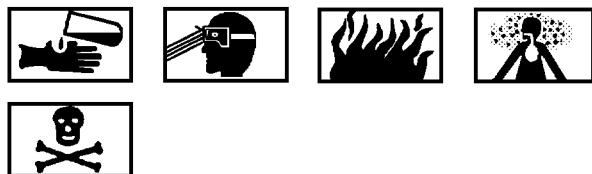
e. Remove successive layers of damaged material in an oval pattern. Each layer of damaged material should be 1/2 to 3/4 inch smaller than the one before. Use care to remove only damaged material.

f. If moisture is present, dry repair area.

NOTE

Each layer of cloth will lay up to about 0.010 thick.

g. Cut cloth pieces to fit each step. Warp of cloth should be in the circumferential direction of the radome.



Adhesive

1

h. Prepare adhesive (A1-F18AC-SRM-250, WP003 00).

i. Impregnate cloth pieces with adhesive. Weight of adhesive required is 40 to 50 percent of the weight of the cloth.

j. Lay impregnated cloth into the inner surface cavity. See figure 4, view A. Warp of cloth shall be in the circumferential direction of the radome.

k. Cover inner surface of repair area with plastic film.

l. Place backing plate over plastic film on inner repair area and secure in place. Plate must be contoured to shape of radome inner wall.

m. Seal under plastic film around periphery of backing plate to prevent air leaks during curing procedure.

n. Lay impregnated cloth into the outer surface cavity. See figure 4, view B. Warp of cloth shall be in the circumferential direction of the radome.

o. Cover the outer surface with one layer of cloth saturated with adhesive. Overlap largest damage cutout by 1/2 to 3/4-inch.

p. Cure repair (A1-F18AC-SRM-250, WP004 00).

q. After cure, remove heat blanket, vacuum bag materials, film, and backing plate.

r. Thoroughly clean inner surface.

s. Cover the inner repair surface with one layer of cloth saturated with adhesive. Overlap largest damage by 1/2 to 3/4-inch.

t. Cure inner repair surfaces (A1-F18AC-SRM-250, WP004 00).

u. After cure, smooth and feather edges of repair using 240 grit abrasive paper.

v. Apply a seal coat of adhesive.

w. Cure adhesive (A1-F18AC-SRM-250, WP004 00).

x. Smooth repair area using 240 grit abrasive paper.

y. Wipe off sanding dust with clean, dry cheesecloth.

z. Refinish repair area (A1-F18AC-SRM-500, WP015 00).

aa. If boot was removed, install new boot (WP003 01).

15. Repair of Resin Cracks Through Wall. See figure 5. Repair of resin cracks is divided into two parts, repair of circs in outside wall, and repair of circs in inside wall.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Squeegee	-
Vacuum Cleaner	MIL-V-21987
X-acto Knife	-

Materials Required

Nomenclature	Specification or Part Number
Adhesive	EA956
Cheesecloth	CCC-C-440, TYPE 1, Class 1
Fiberglass	713-450-NT-37.5
Film, Plastic	200SG40TR
Tape, Pressure Sensitive	A-A-883, Type 1, 1 inch
Paper, Abrasive	A-A-1047, Grit 240-9x11

a. Repair of outer circ damage.

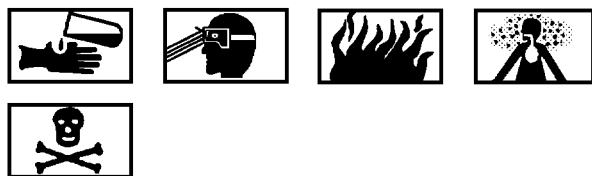
(1) Mask off damage with pressure sensitive tape. Mask off an area 2 inches larger than the damage.

(2) Remove finish coat by sanding with 240 grit abrasive paper. Feather finish system approximately 1/4-inch back from damage.

(3) Two methods may be used to repair damaged circs, depending on the amount and length of loose circs, per procedures below.

b. Minor repair using adhesive.

(1) Separate the loose circs, without removing circs, using a knife point or equivalent. Remove loose resin.



Adhesive

1

(2) Prepare adhesive (A1-F18AC-SRM-250, WP003 00).

(3) Brush apply adhesive to the damaged area until saturated, then cover area with plastic film.

(4) Using a squeegee, work the repair area to remove air bubbles and excessive adhesive.

(5) Cure adhesive (A1-F18AC-SRM-250, WP004 00).

c. Circ replacement repair.

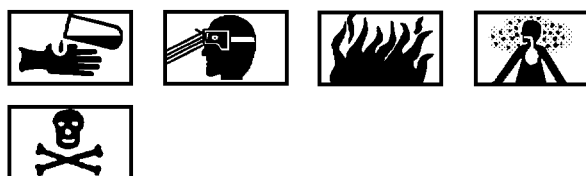
(1) Remove damaged circs by cutting them out with a knife blade.

(2) Clean repair area using vacuum cleaner, then wipe with clean, dry cheesecloth.

(3) Cut several pieces of fiberglass to length slightly longer than removed damaged circs.

(4) Cut two pieces of plastic film approximately 12 inches square.

(5) Locate one piece of plastic film on a flat surface. Lay pieces of fiberglass side by side on the film.



Adhesive

1

(6) Prepare adhesive (A1-F18AC-SRM-250, WP003 00).

(7) Pour adhesive over fiberglass until thoroughly saturated, then cover with the other piece of plastic film.

(8) Hold plastic film in place and work as much of the adhesive out as possible using a squeegee.

(9) Remove top layer of plastic film.

(10) Replace missing circs with hand laid, adhesive saturated, fiberglass. Lay up enough fiberglass so surface of repair extends slightly above mold line to allow for compression.

(11) Cover repair with plastic film and work out air bubbles and excess adhesive using a squeegee.

(12) Cure adhesive (A1-F18AC-SRM-250, WP004 00).

(13) After cure, sand repair smooth and flush with moldline surface. Wipe repair area with clean dry cheesecloth.

(14) Prepare adhesive (A1-F18AC-SRM-250, WP003 00).

(15) Brush apply adhesive over the repair surface and cover repair with plastic film.

(16) Cure adhesive (A1-F18AC-SRM-250, WP004 00).

(17) Refinish repair area (A1-F18AC-SRM-500, WP015 00).

d. Repair of inner circs damage.

(1) Mask off damage with pressure sensitive tape. Mask off an area 2 inches larger than the damage.

(2) Separate the loose circs using the knife point and scrape away as much of the foreign matter (dark material) as possible without removing circs.

(3) Prepare adhesive (A1-F18AC-SRM-250, WP003 00).

(4) Brush apply adhesive to the damaged area until saturated, then cover area with plastic film.

(5) Work out air bubbles and excess adhesive using a squeegee.

(6) Cure adhesive (A1-F18AC-SRM-250, WP004 00).

(7) After cure, sand repair area smooth and flush with radome inner surface. Wipe surface with clean, dry cheesecloth.

(8) Refinish repair area (A1-F18AC-SRM-500, WP015 00).

16. **RADOME RECEPTACLE SEALANT REPAIR.**
See figure 6.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Cover, Antenna	74D740001-1001

Materials Required

Nomenclature	Specification or Part Number
Cheesecloth	CCC-C-440, Type 1, Class 1
Isopropyl Alcohol	TT-I-735
Paper, Abrasive	A-A-1047, Grit 320-9x11
Sealing Compound	RTV-88

a. Open radome (A1-F18AC-LMM-010).

b. Install antenna cover.



If repairing or replacing receptacle sealant, radome must be supported to withstand additional weight of maintenance personnel to prevent damage to radome.

c. Inspect receptacle to determine type of sealing compound installed.



Use care when removing sealant not to damage fiberglass radome shell.

d. White/off-white colored sealant is RTV-11 and must be removed:

(1) Remove sealant from receptacle.



Isopropyl Alcohol

2

(2) Remove any residual sealant from receptacle and/or mating surface of radome by lightly sanding and wiping with clean cheesecloth moistened with isopropyl alcohol.

(3) Wipe surface dry with clean dry cheesecloth before isopropyl alcohol evaporates.

e. Red colored sealing compound is RTV-88 and must be inspected for damage:

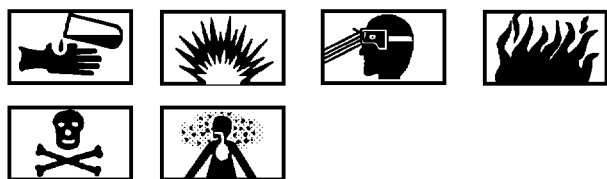
(1) Area showing minor damage should be cleaned with clean cheesecloth moistened with isopropyl alcohol. Once dry, spot damage may be touched up with additional RTV-88 as per step i. below.

(2) Area showing major damage as a result of lightning damage must be repaired:

(a) Remove damaged area of sealant.

(b) Remove any residual sealant from receptacle and/or mating surface of radome by lightly sanding and wiping with clean cheesecloth moistened with isopropyl alcohol.

(c) Wipe surface dry with clean dry cheesecloth before isopropyl alcohol evaporates.



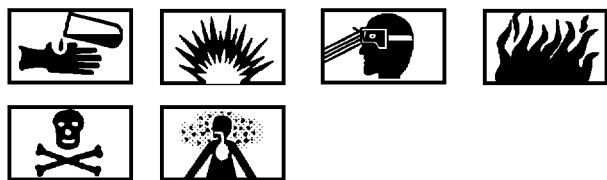
Rubber Primer

3

f. Brush apply a thin coat of rubber primer to any bare exposed metal on receptacle.

g. Brush apply a thin coat of rubber primer to radome shell, extending primer 3/8 inch past receptacle.

h. Allow rubber primer to air dry.



Sealing Compound

4



RTV-88 sealing compound must be applied to area over receptacle to prevent lightning damage.

i. Prepare RTV-88 sealing compound in a weight ratio of 25 parts base compound to 1 part catalyst.

j. Mix thoroughly and slowly to avoid excess air entrapment.

k. Apply sealing compound over entire receptacle to a thickness of 0.10 to 0.20 inch, see sealant application (A1-F18AC-SRM-200, WP011 00).

l. Apply fillet seal between receptacle and radome shell avoiding excessive air pockets and/or voids, see sealant application (A1-F18AC-SRM-200, WP011 00).

m. Allow sealing compound to cure for 30 hours.

n. Remove antenna cover.

o. Close radome (A1-F18AC-LMM-010).

17. REPLACEMENT.

18. RADOME RECEPTACLE. See figure 7.

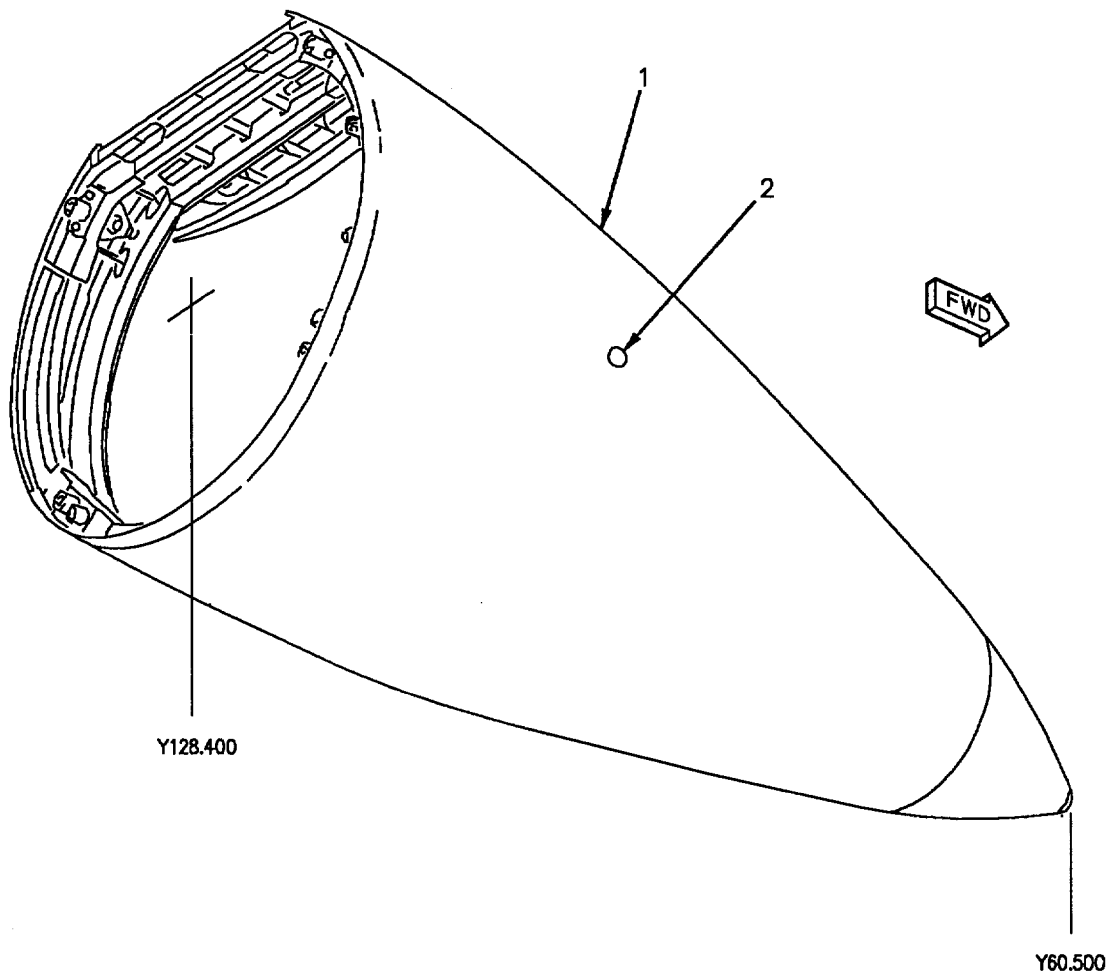
a. Open and support radome.

b. Remove receptacle.

c. Align and locate receptacle in place using washer shim to obtain flush moldline between receptacle and radome shell.

d. Install fasteners.

e. Do Radome Receptacle Sealant Repair, this WP.



00300101

IDX NO.	EFT	NOMENCLATURE AND PART NO.	DESCRIPTION	MATERIAL
1		Shell BD0454001-105	Molded	<input type="checkbox"/> 1
2		Receptacle 74A311035-2001 <input type="checkbox"/> 2	0.85 Plate	7075-T7351 Al Aly
LEGEND				
<input type="checkbox"/> 1 Glass roving and glass fabric.				
<input type="checkbox"/> 2 For replacement see figure 6.				

Figure 1. Material Index

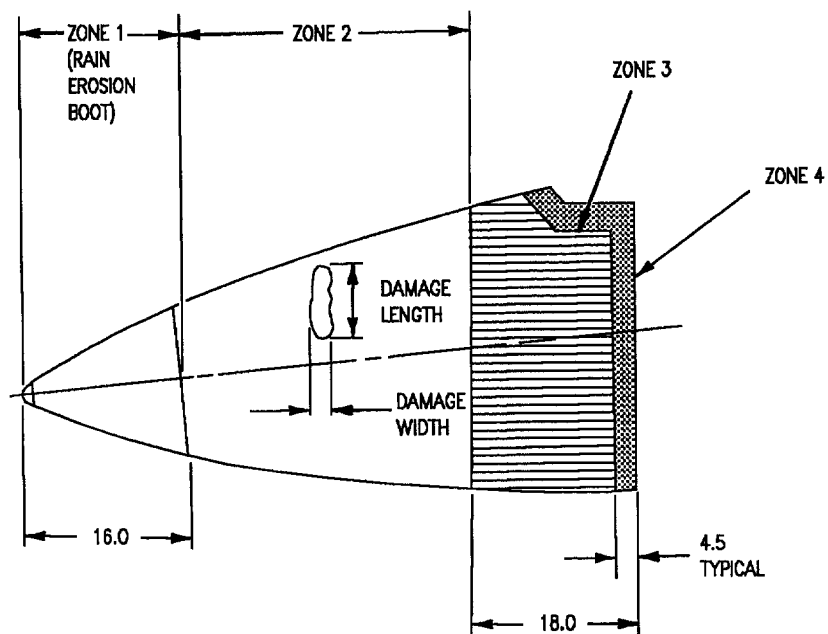
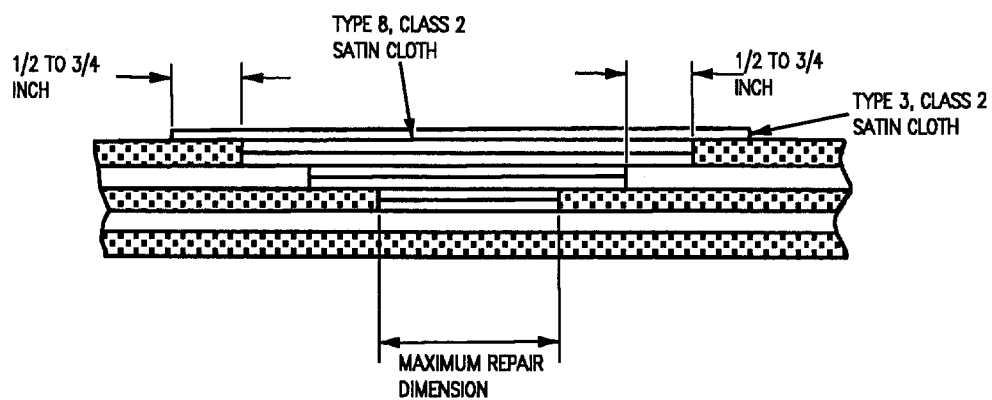
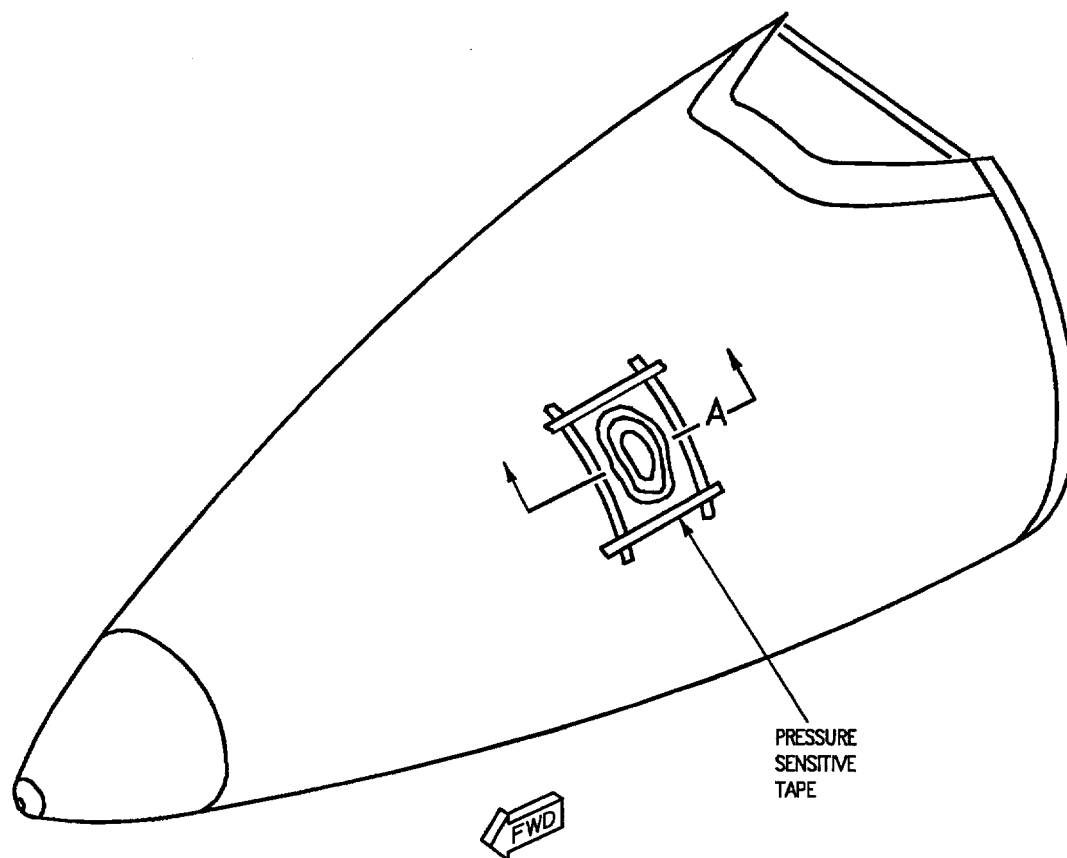
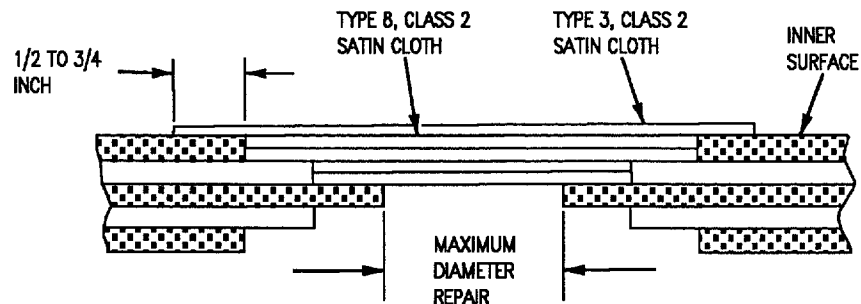
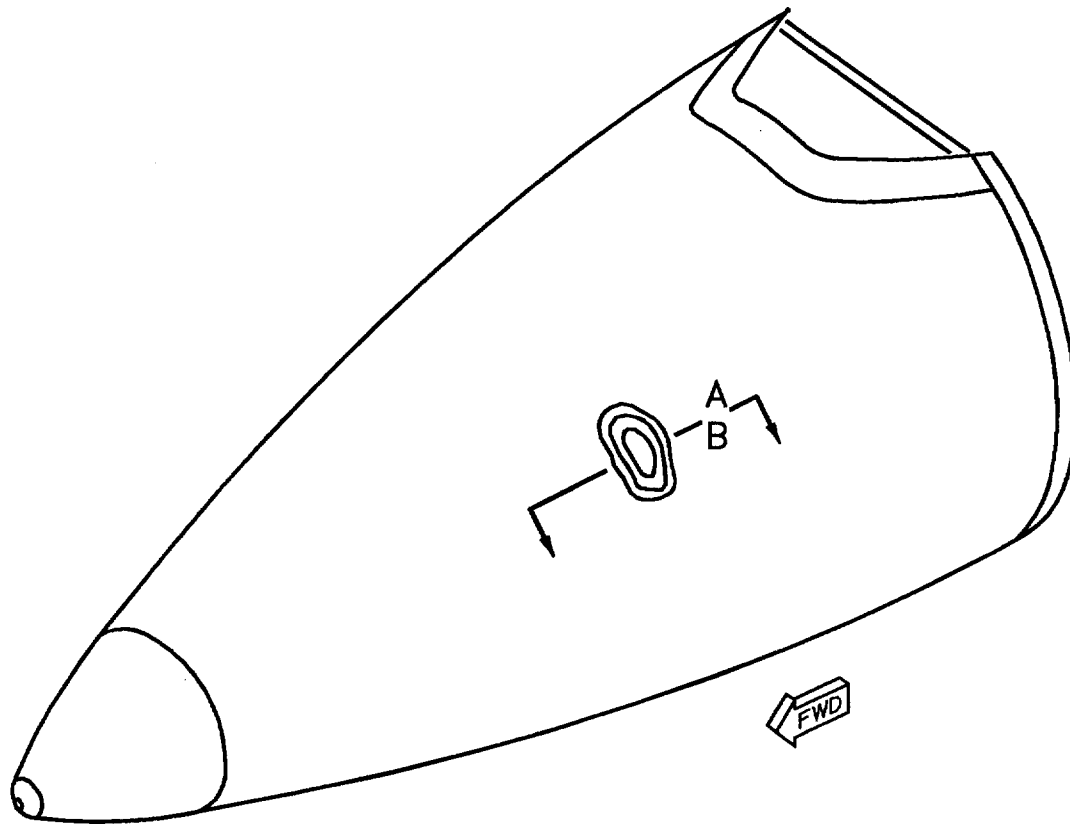


Figure 2. Zones for Repairable Damage



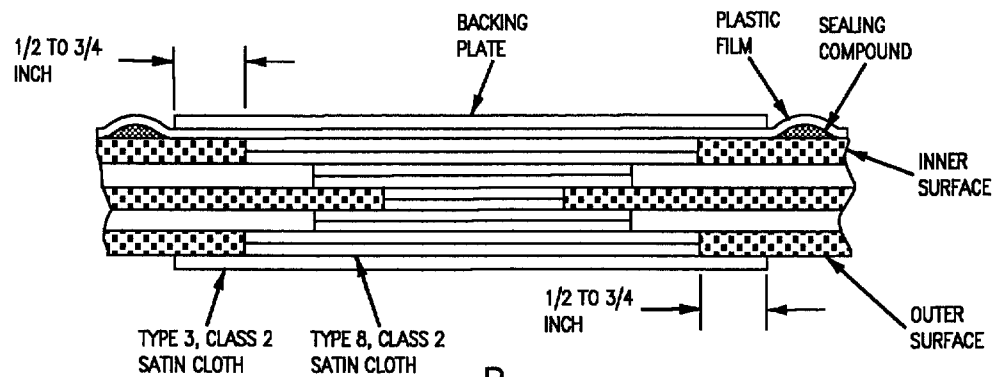
A

Figure 3. Repair of Shell Major Surface Damage, Class II



A

INNER REPAIR PLYS INSTALLED



B

OUTER REPAIR PLYS INSTALLED

Figure 4. Repair of Hole Through Wall, Class III Damage

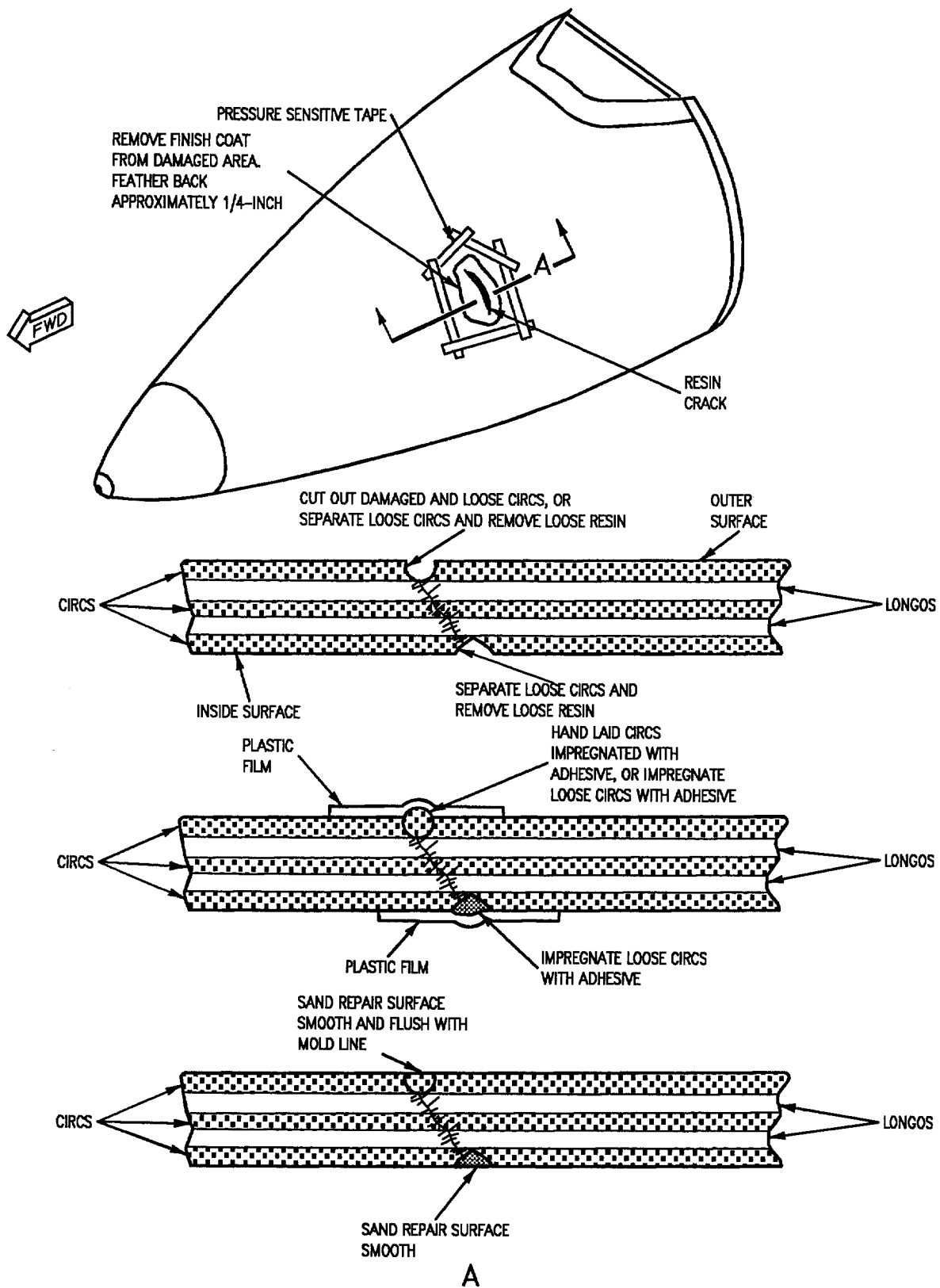


Figure 5. Repair of Resin Cracks Through Wall, Class III Damage

003005

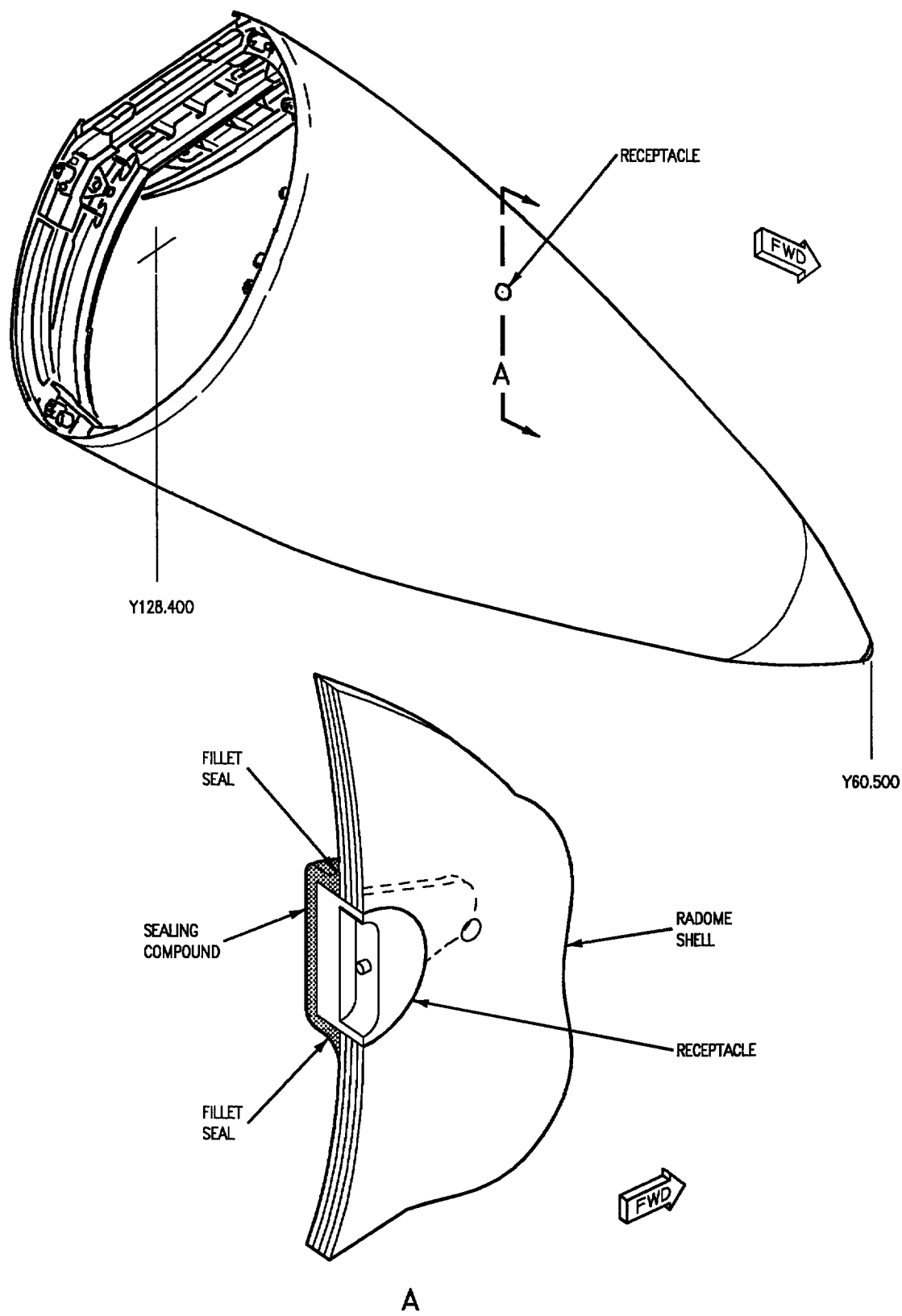
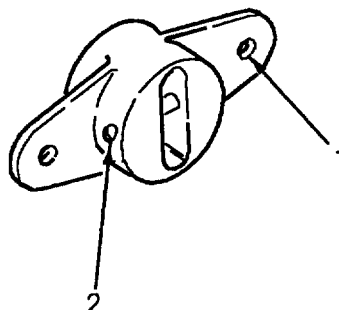


Figure 6. Receptacle Sealing



00300701

IDX NO.	EFT		NOMENCLATURE	PART NUMBER
1			Pin Washer, Shim	HLT313TA5-7 4M38A10
2			Pin	MS16556-830
<p style="text-align: center;">LEGEND</p> <p> Hole diameter is 0.1635 +0.0025 -0.0000.</p>				

Figure 7. Replacement of Radome Receptacle

ORGANIZATIONAL MAINTENANCE

STRUCTURE REPAIR

RADOME BOOT AND NOSE CAP

Reference Material

Radome Shell	WP003 00
Radome Structure	WP003 02
Aircraft Corrosion Control	A1-F18AC-SRM-500
Radome Finish System and Markings	WP015 00
Line Maintenance Access Doors	A1-F18AC-LMM-010
Structure Repair, General Information	A1-F18AC-SRM-200
Adhesive, Cement, and Sealant; Preparation and Application	WP011 00
Structure Repair, Typical Repair	A1-F18AC-SRM-250
Material Preparation	WP003 00
Curing of Repairs	WP004 00

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Record of Applicable Technical Directives

None

1. **BOOT DAMAGE EVALUATION.** See figure 1.

2. The figure identifies type of material used. The data shown can be used to analyze the damage.

3. **REPAIRABLE DAMAGE.** Repairable damage is damage that can be permanently repaired with no adverse affect on structural integrity, flight characteristics, or safety of the aircraft.

4. **Class I Damage.** Damage is made up of scuffs on the boot.

5. **Class II Damage.** Damage is made up of cuts and splits. Damage may be through the boot but shall not exceed 1-1/2 inches in length.

6. **Class III Damage.** Damage is made up of voids or blisters.

Support Equipment Required

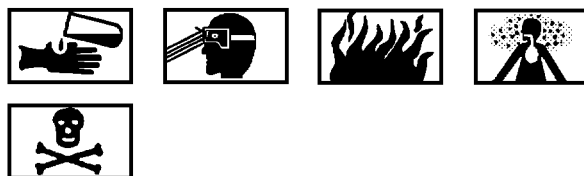
Nomenclature	Part Number or Type Designation
Needle, Hypodermic, (2 required)	Number 20
Syringe, Hypodermic, 3CC	-

Materials Required

Nomenclature	Specification or Part Number
Adhesive	R35
Brush, Artists	H-B-118 Type 3, Class 25TC, Size 1/2
Cheesecloth	CCC-C-440, Type 1, Class 1
Cup, Paper, Wax-Free	UU-C-806, Type 1, Style A, Class 1
Depressor, Tongue	GG-D-226, Type 1
Methyl Ethyl Ketone	TT-M-261
Cleaning Solvent	MIL-C-38736
Paper, Abrasive	A-A-1047, Grit 240-9x11
Pencil, Aircraft	M83953-1 or 2
Sealing Compound	MIL-S-83430, Class A-1/2
Tape, Pressure Sensitive	855-1.000 inch

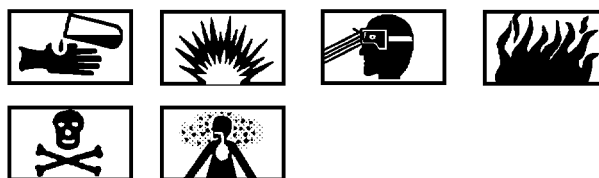
7. REPAIRS.

8. Class I Damage Repair.



Methyl Ethyl Ketone

5



Cleaning Solvent

6



To avoid contamination of solvent, always pour solvent onto clean cheesecloth. Never dip cheesecloth into solvent.

a. Clean scuffed area by wiping with clean cheesecloth dampened with solvent. Wipe dry with clean, dry cheesecloth before solvent evaporates.



Sealing Compound

7

b. Prepare sealing compound (A1-F18AC-SRM-250, WP003 00).

c. Apply a brush coat of sealing compound to the scuffed area.

d. Cure sealing compound (A1-F18AC-SRM-250, WP004 00).

9. Class II Damage Repair.



Methyl Ethyl Ketone

5



Cleaning Solvent

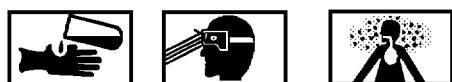
6



To avoid contamination of solvent, always pour solvent onto clean cheesecloth. Never dip cheesecloth into solvent.

a. Clean damaged area by wiping with clean cheesecloth dampened with solvent. Wipe dry with clean, dry cheesecloth before solvent evaporates. Air dry for 15 minutes.

b. If boot material adjacent to the damage is loose, rebond per step c through g. If boot material is securely bonded to the radome, proceed to step h.



Adhesive

8

c. Prepare adhesive.

(1) Combine by weight 10 parts of part A with 8 parts of part B in a paper cup.

(2) Use a tongue depressor to mix the two parts. Color of adhesive will be uniform when correctly mixed.

d. Brush apply adhesive to radome under the loose material.

e. Tape loose material in place.

f. Cure adhesive at room temperature for 12 hours before removing tape.

g. Remove tape and sand smooth with abrasive paper.



Sealing Compound

7

h. Prepare sealing compound (A1-F18AC-SRM-250, WP003 00).

i. Apply a brush coat of sealing compound to the split or cut area. Fill the area to mold line flushness.

j. Cure sealing compound (A1-F18AC-SRM-250, WP004 00).

10. Class III Damage Repair.

a. Mark blister or void outline with a pencil.

b. Insert hypodermic needle on a slant into one end of blister or void. This is a vent needle.



Adhesive

8

c. Prepare adhesive.

(1) Combine by weight 10 parts of part A with 8 parts of part B in a paper cup.

(2) Use a tongue depressor to mix the two parts. Color of adhesive will be uniform when correctly mixed.

d. Using hypodermic syringe with needle attached, inject a few drops of adhesive into end of blister or void opposite the vent needle.

e. Remove injection needle. Do not remove vent needle.

f. Using finger pressure, work the adhesive from injection hole across the void area until adhesive reaches vent needle. Make sure any trapped air stays ahead of the adhesive.

g. Remove vent needle.

h. Using finger pressure, work the excess adhesive out of the two holes until boot surface is smooth.

i. Clean the boot surface with clean cheesecloth dampened with solvent.

j. Cure adhesive at room temperature for at least 12 hours.

11. REPLACEMENT.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Spatula	-
Squeegee	-
X-acto Knife	-

Materials Required

Nomenclature	Specification or Part Number
Adhesive	3145 RTV Gray
Adhesive	R35
Brush, Varnish	H-B-695, TYPE 1, Grade A, Size 2
Cheesecloth	CCC-C-440, Type 1, Class 1
Cleaning Solvent	MIL-C-38736
Cup, Paper, Wax-free	UU-C-806, Type 1, Style A, Class 1
Depressor, Tongue	GG-D-226, Type 1
Methyl Ethyl Ketone	TT-M-261
Paper, Abrasive	A-A-1047, Grit 180-9x11 Grit 320-9x11
Plastic Sheet	LP378TYICL1GRB FNSH1-0-00 4x50x96
Sealing Compound	MIL-S-83430, Class A-1/2

Materials Required (Continued)

Nomenclature	Specification or Part Number
Talcum Powder	A-A-42A
Tape, Pressure Sensitive	A-A-883, Type 1, 1 inch



Methyl Ethyl Ketone

5



Cleaning Solvent

6



To avoid contamination of solvent, always pour solvent onto clean cheesecloth. Never dip cheesecloth into solvent.

a. Remove nose cap retaining screw and nose cap.

b. Remove rain erosion boot by applying solvent along trailing edge and working boot carefully away from radome; continue to apply solvent while rolling boot forward over itself until boot is completely removed.

NOTE

Care should be taken not to remove the polyurethane paint.

c. Remove old adhesive from radome by wiping with cheesecloth saturated with solvent.

d. Inspect radome shell; if shell is damaged, classify damage and repair (WP003 00). If black tracer coat is showing through the polyurethane surface coat, refinish the radome. (A1-F18AC-SRM-500, WP015 00).

e. Cut a 0.50 inch diameter hole in the center of the new boot.

f. Place boot over radome with the brand name on the outer surface and oriented to the bottom side of radome.

g. Using a pencil, lay out a trim line for the aft edge of boot. Locate the line 18.25 inches back from the tip around the circumference of the radome.

h. Apply pressure sensitive tape to aft edge of trim line. Remove boot.

i. Tape plastic sheet to the radome just aft of the abutting tape.

j. Lightly buff sand radome surface forward of the boot trim line with 320 grit abrasive paper to remove surface sheen. Wipe dust from radome surface with clean dry cheesecloth.

k. Clean bonding surface of boot by wiping with clean cheesecloth dampened with solvent. Wipe surface dry with clean, dry cheesecloth before solvent evaporates.

l. Place boot inside out on radome and temporarily fasten at the trailing edge with tape.

m. Roughen surface of boot with 180 grit abrasive paper.

n. Clean bonding surface of boot by wiping with clean cheesecloth dampened with solvent. Wipe surface dry with clean, dry cheesecloth before solvent evaporates.

(2) Use a tongue depressor to mix the two parts. Color of adhesive will be uniform when correctly mixed.

p. Brush apply a thin coat of R35 adhesive to the boot surface.

q. Remove boot and hang it so R35 adhesive does not contact other surfaces.

r. Brush apply a thin coat of adhesive to radome surface forward of the trim line. Squeegee off excess adhesive.

s. Install reversed boot on radome. Starting at the leading edge, roll boot aft onto adhesive. Using hands, remove trapped air.

t. Tape the trailing edge of boot to radome several places around periphery.

u. Apply talcum powder over surface of boot, and using ones hands, sweep the boot from the leading edge to within 1 inch of trailing edge. Repeat this procedure until entrapped air or excess adhesive is eliminated.

v. Sweep the final 1 inch of boot and wipe excess adhesive away with cheesecloth dampened with solvent.

w. Tape trailing edge of boot to radome several places around periphery.

x. Wash radome with clean cheesecloth dampened with solvent.

y. Allow adhesive to cure for 12 hours at room temperature.

z. After cure, remove plastic sheet and tape from trailing edge of boot.

aa. Lift excess trailing edge material up to forward edge of trim line all the way around circumference of radome.



Use care not to cut into radome.

ab. Using a knife, cut off excess material at forward edge of tape. Maintain a uniform tension on trim material while cutting.

ac. Check that boot edge is firmly cemented all around.



Adhesive

8

o. Prepare R35 adhesive.

(1) Combine by weight 10 parts of part A with 8 parts of part B in a paper cup.

ad. Remove pressure sensitive tape and clean excess adhesive from radome with clean cheesecloth dampened with solvent. Wipe dry with clean dry cheesecloth before solvent evaporates.

ae. Clean area at trim edge of boot extending approximately 1/2 inch aft of boot with solvent.

af. Mask off boot at trim edge using 1/2 inch wide masking tape leaving boot edge exposed.

ag. Apply another strip of 1/2 inch wide tape 1/4 inch aft of boot.



Adhesive

9

ah. Apply 3145 RTV GRAY adhesive to the exposed boot edge and 1/4 wide strip.

ai. Smooth off excess adhesive using a spatula with a square end.

aj. Remove masking tape as soon as excess adhesive is removed.

ak. Replace nose cap and retaining screw per paragraph 14.

12. NOSE CAP DAMAGE EVALUATION.

See figure 1.

13. The figure identifies type of material used. No damage to the nose cap or the plug assembly is allowed. Replacement per paragraph 14.

14. REPLACEMENT.

Support Equipment Required

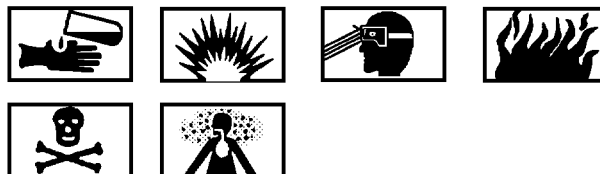
None

Materials Required

Nomenclature	Specification or Part Number
Brush, Artists	H-B-118 Type 3, Class 2, Size 1/2
Cheesecloth	CCC-C-440, Type 1, Class 1

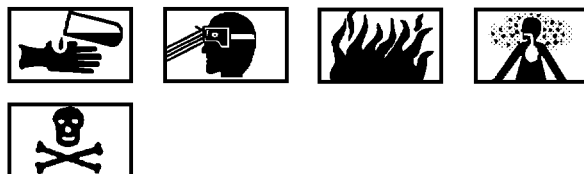
Materials Required (Continued)

Nomenclature	Specification or Part Number
Methyl Isobutyl Ketone	D1153
Cleaning Solvent	MIL-C-38736
Sealing Compound	MIL-S-83430, Class A-1/2



Cleaning Solvent

6



Methyl Isobutyl Ketone

10



To avoid contamination of solvent, always pour solvent onto clean cheesecloth. Never dip cheesecloth into solvent.

a. Remove sealing compound from inside of nose cap.

b. Clean inside surface of nose cap and the bonding surface of the radome by wiping with clean cheesecloth dampened with solvent. Wipe surface dry with clean dry cheesecloth before solvent has evaporated.



Sealing Compound

7

c. Prepare sealing compound (A1-F18AC-SRM-250, WP003 00).

d. Brush apply a thin coat of sealing compound to inside surface of nose cap.

e. Install nose cap and retaining screw.

f. Cure sealing compound (A1-F18AC-SRM-250, WP004 00).

g. Do nose plug sealant repair if required, see paragraph 15.

15. NOSE PLUG SEALANT REPAIR. See figure 2.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Cover, Antenna	74D740001-1001

Materials Required

Nomenclature	Specification or Part Number
Cheesecloth	CC-C-440, Type 1, Class 1
Isopropyl Alcohol	TT-I-735
Paper, Abrasive	A-A-1047 Grit 320-9x11
Primer, Rubber	SS4004
Sealing Compound	RTV-88

a. Open radome (A1-F18AC-LMM-010).

b. Install antenna cover.



If repairing or replacing nose plug sealant, radome must be supported to withstand additional weight of maintenance personnel to prevent damage to radome.

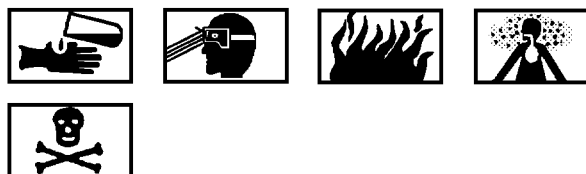
c. Inspect nose plug to determine type of sealing compound installed.



Use care when removing sealant not to damage fiberglass radome shell.

d. White/off-white colored sealant is RTV-11 and must be removed:

(1) Remove sealant from nose plug.



Isopropyl Alcohol

2

(2) Remove any residual sealant from nose plug and/or mating surface of radome by lightly sanding and wiping with clean cheesecloth moistened with isopropyl alcohol.

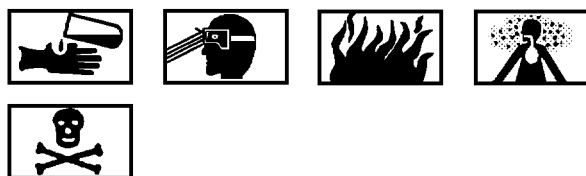
(3) Wipe surface dry with clean dry cheesecloth before isopropyl alcohol evaporates.

e. Red colored sealing compound is RTV-88 and must be inspected for damage:

(1) Area showing minor damage should be cleaned with clean cheesecloth moistened with isopropyl alcohol.

(2) Area showing major damage as a result of lightning damage must be repaired:

(a) Remove damaged area of sealant.

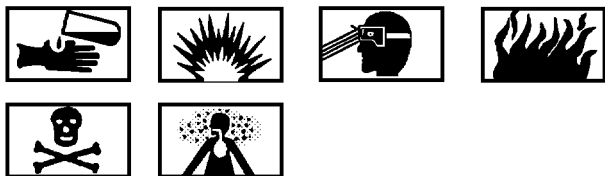


Isopropyl Alcohol

2

(b) Remove any residual sealant from nose plug and/or mating surface of radome by lightly sanding and wiping with clean cheesecloth moistened with isopropyl alcohol.

(c) Wipe surfaces dry with clean dry cheesecloth before isopropyl alcohol evaporates.



Rubber Primer

3

f. Brush apply a thin coat of rubber primer to any bare exposed metal on nose plug.

g. Brush apply a thin coat of rubber primer to radome shell extending primer 3/8 inch past nose plug.

h. Allow rubber primer to air dry.



Sealing Compound

4



RTV-88 sealing compound must be applied to area over nose plug to prevent lightning damage.

i. Prepare RTV-88 sealing compound in a weight ratio of 25 parts base compound to 1 part catalyst.

j. Mix thoroughly and slowly to avoid excessive air entrapment.

k. Apply sealing compound over nose plug to a thickness of 0.10 to 0.20 inch, see sealant application (A1-F18AC-SRM-200, WP011 00).

l. Apply fillet seal between nose plug and radome shell avoiding excessive air pockets and/or voids, see sealant application (A1-F18AC-SRM-200, WP011 00).

m. Allow sealing compound to cure for 30 hours.

n. Remove antenna cover.

o. Close radome (A1-F18AC-LMM-010).

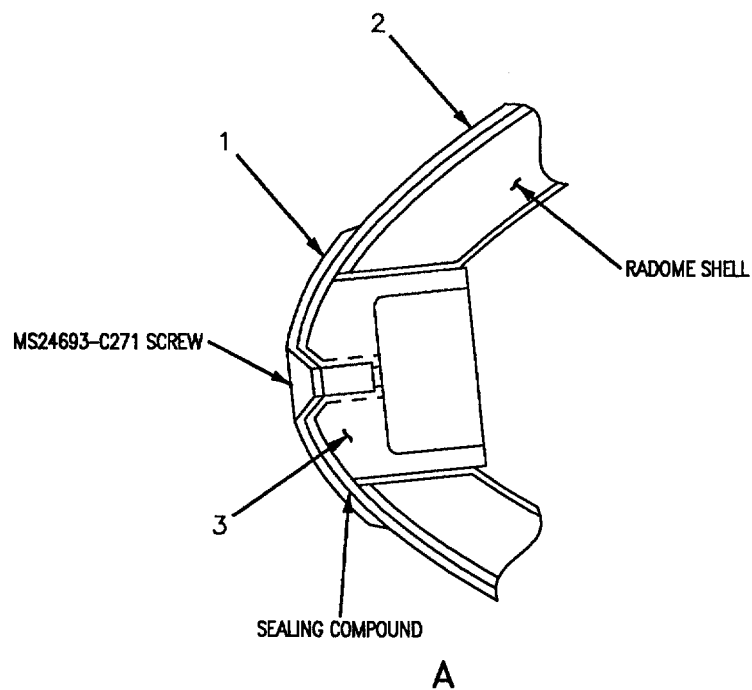
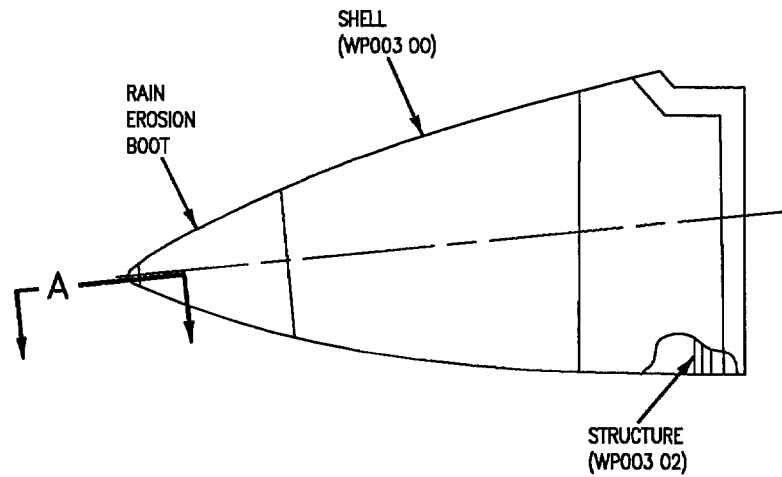


Figure 1. Material Index (Sheet 1)

IDX NO.	EFT	NOMENCLATURE AND PART NO.	DESCRIPTION	MATERIAL
1		Nose Cap BD0454004-1	Plate	304 Cres
2		Boot BD0454005-3	Elastomeric	Polyurethane
3		Nose Plug BD0454003-101	Plate	304 Cres

Figure 1. Material Index (Sheet 2)

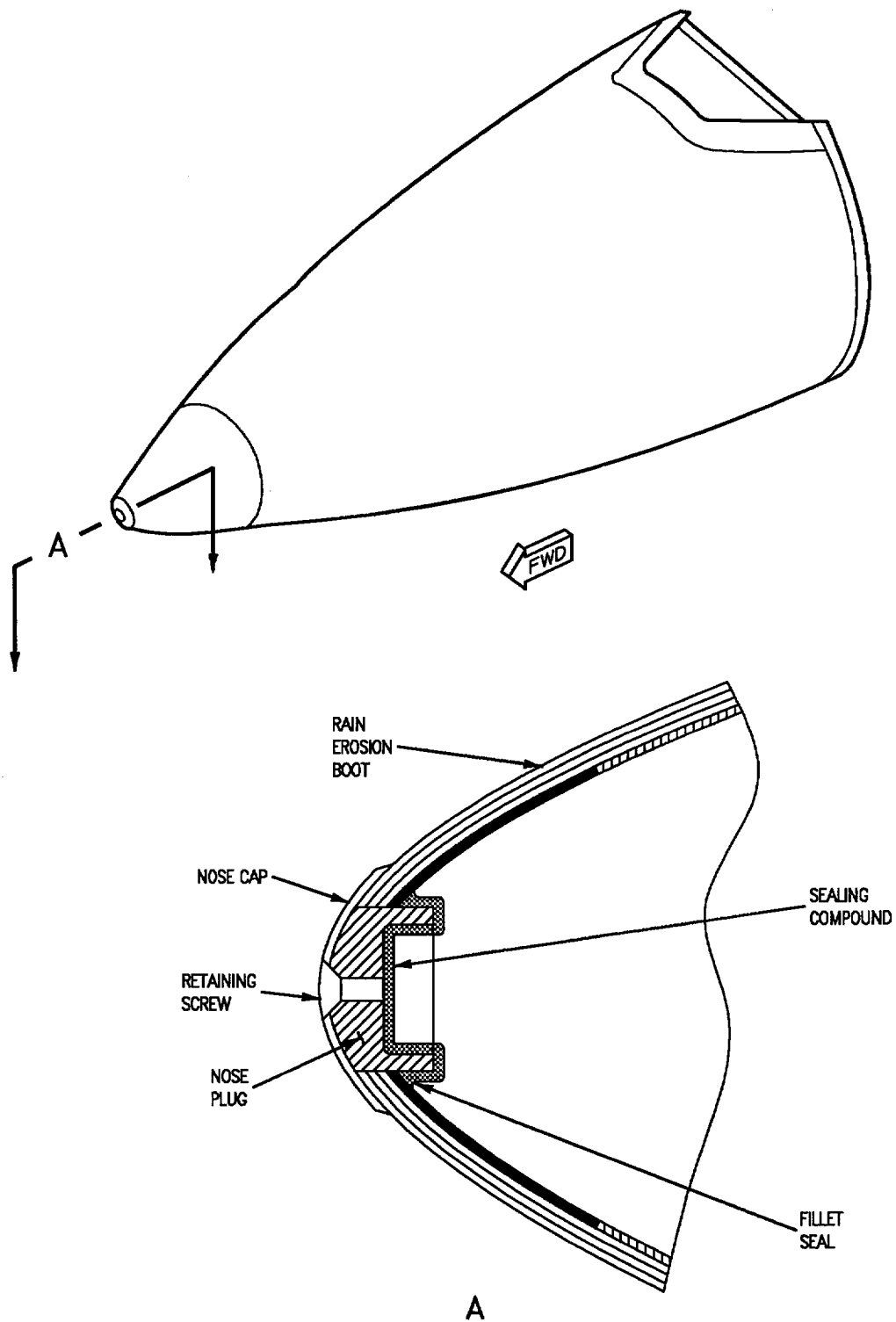


Figure 2. Nose Plug Sealing

ORGANIZATIONAL MAINTENANCE

STRUCTURE REPAIR

RADOME STRUCTURE

Reference Material

Aircraft Corrosion Control	A1-F18AC-SRM-500
Radome Finish System and Markings	WP015 00
Line Maintenance Access Doors	A1-F18AC-LMM-010
Structure Repair, Typical Repair	A1-F18AC-SRM-250
Aluminum Patch Fabrication	WP006 01
Aluminum, Graphite Epoxy, or Titanium Patch Installation and Removal	WP007 00
Aluminum and Titanium Sheet, Formed Structure	WP033 00
Aluminum Sheet Edge Repair	WP034 00
Blending	WP038 00
Structure Repair, General Information	A1-F18AC-SRM-200
Introduction	WP002 00
Adhesive, Cement, and Sealant; Preparation and Application	WP011 00
Aircraft Weapons Systems Cleaning and Corrosion Control	NAVAIR 01-1A-509

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Repairable Damage	2
Repairs	2
Permanent Repairs	2
Cracks	2
Dents	3
Edge	3
Holes	3
Scratches, Nicks, Gouges, or Corrosion	2
Replacement	3
Drain Adapter	3
74A311026 Environmental Seal	4

Record of Applicable Technical Directives

None

1. **DAMAGE EVALUATION.** See figures 1 and 2.

2. Damage is classified as negligible and repairable. Locating and determining size of damage by visual method is organizational maintenance. The types of

materials used are shown on figure 1. Repair zones are shown on figure 2. Allowable damage limits within repair zones are listed in tables 1 and 2. Damage not listed or exceeding the following limits require a depot engineering disposition.

3. **NEGLIGIBLE DAMAGE.** Negligible damage is damage that may be allowed to exist as is. However, preventive maintenance, for temporary corrosion arrestment, should be done to scratches (NAVAIR 01-1A-509). The types and limits of damage are listed below and in table 1. The figure and index numbers in table 1 coincide with the figure and index numbers in the material index.

a. Scratches are not allowed within one diameter from the edge of any hole.

b. Smooth dents only, effective diameter at least 20 times the depth.

4. **REPAIRABLE DAMAGE.** The types and limits of damage are listed below and in table 2. The figure and index numbers in table 2 coincide with figure and index numbers in the material index, figure 1.

NOTE

The limits in table 2 apply after blending the damage.

a. Scratches.

(1) Any scratches within one diameter of any hole must be blended out. Minimum blend out is one diameter from edge of any hole.

(2) Scratches to be blended out with diameter, or width, at surface at least 20 times the depth.

b. Nicks, gouges, and corrosion to be blended out with diameter, or width, at surface at least 20 times the depth.

c. Cracks. All cracks must be repaired.

d. Holes.

(1) Damage in areas free of structure and lands must have edge of cleanup hole at least eight repair fasteners diameters from any land, internal structure or existing row of fasteners.

(2) Damage to lands, overstructure, only one repair per land.

e. Dents exceeding the limits in table 1 must be repaired.

5. REPAIRS.

6. Types of repairs are temporary, one-time flight, permanent, critical area, alternate, and typical. Repair type definitions are in structure repair terms (A1-F18AC-SRM-200, WP002 00).

7. PERMANENT REPAIRS.

8. Scratches, Nicks, Gouges, or Corrosion.

Blend scratches, nicks, gouges, or corrosion (A1-F18AC-SRM-250, WP038 00). If after blending, the damage limits of table 2 are exceeded, repair aluminum sheet as below. Refinish blended areas (A1-F18AC-SRM-500, WP015 00).

a. Scratches - make crack or edge repairs.

b. Nicks, gouges, or corrosion - make hole or edge repair.

9. Cracks.

a. In repair zones B3, repair cracks free of structure or land areas in aluminum sheet (0.050 inch thickness or less) as below:

(1) Completely cut out crack in the smallest diameter circle possible.

(2) Fabricate patch (A1-F18AC-SRM-250, WP006 01).

(3) Install patch using FM300 Adhesive (A1-F18AC-SRM-250, WP007 00).

(4) Refinish repaired area (A1-F18AC-SRM-500, WP015 00).

b. In repair zone A3, repair cracks to aluminum formed structure (A1-F18AC-SRM-250, WP033 00) as below:

(1) Cut out crack.

(2) Install angle or strap.

(3) Refinish repair area (A1-F18AC-SRM-500, WP015 00).

10. Holes.

a. In repair zones B3, repair holes free of structure or land areas in aluminum sheet (0.050 inch thickness or less) as below:

(1) Completely cut out hole in the smallest diameter circle possible.

(2) Fabricate patch (A1-F18AC-SRM-250, WP006 01).

(3) Install patch using FM300 Adhesive (A1-F18AC-SRM-250, WP007 00).

(4) Refinish repaired area (A1-F18AC-SRM-500, WP015 00).

b. In repair zone A3, repair holes to aluminum formed structure (A1-F18AC-SRM-250, WP033 00) as below:

(1) Cut out hole.

(2) Install angle or strap.

(3) Refinish repair area (A1-F18AC-SRM-500, WP015 00).

11. **Edge.** In zone A1, repair edge damage in aluminum sheet (A1-F18AC-SRM-250, WP034 00) as below:

a. Cut out damage.

b. Install flush or lap patch.

c. Refinish repaired area (A1-F18AC-SRM-500, WP015 00).

12. Dents.

a. In repair zones B3, repair dents free of structure or land areas in aluminum sheet (0.050 inch thickness or less) as below:

(1) Completely cut out dent in the smallest diameter circle possible.

(2) Fabricate patch (A1-F18AC-SRM-250, WP006 01).

(3) Install patch using FM300 Adhesive (A1-F18AC-SRM-250, WP007 00).

(4) Refinish repaired area (A1-F18AC-SRM-500, WP015 00).

b. In repair zone A3, repair dents to aluminum formed structure (A1-F18AC-SRM-250, WP033 00) as below:

(1) Cut out dent.

(2) Install angle or strap.

(3) Refinish repair area (A1-F18AC-SRM-500, WP015 00).

13. REPLACEMENT.

14. **DRAIN ADAPTER.** When damaged, drain adapter must be replaced, See figure 1 (11).

Support Equipment Required

None

Materials Required

Nomenclature	Specification or Part Number
Cheesecloth	CCC-C-440, Type 1, Class 1
Drain Adapter	74A315044-1005, -1006
Isopropyl Alcohol	TT-I-735
Rivets (2)	MS20470AD4
Rivets (3)	MS20470AD5
Sealing Compound	MIL-S-81733, Type 1-2

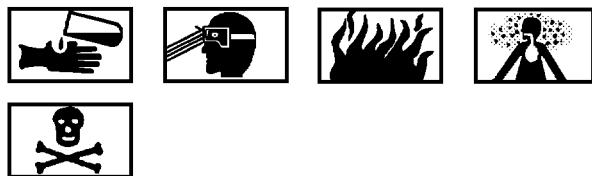
a. Disconnect tubing from drain adapter.



Be careful not to enlarge holes when drilling out rivets. Damage to support can occur.

b. Remove rivets attaching drain adapter to support.

c. Remove drain adapter.



Isopropyl Alcohol

2

d. Clean area of existing sealant using cheesecloth moistened with isopropyl alcohol. Wipe dry with clean dry cheesecloth before isopropyl alcohol evaporates.

e. Locate new drain adapter with pilot holes aligned with aft attach holes.

f. Secure new drain adapter in position.

g. Backdrill two 0.128 +0.006 -0.000 diameter aft holes through pilot holes in drain adapter.

h. Backdrill three 0.159 +0.007 -0.000 diameter forward holes.

i. Remove adapter and deburr holes.



Sealing Compound

11

j. Fay seal drain adapter to support using sealing compound. Be sure sealing compound seals joggle.

k. Install two aft MS20470AD4 rivets wet with sealing compound (A1-F18AC-SRM-200, WP011 00).

l. Install three forward MS20470AD5 rivets wet with sealing compound (A1-F18AC-SRM-200, WP011 00).

m. Refinish area (A1-F18AC-SRM-500, WP015 00).

n. Connect tubing.

15. **74A311026 ENVIRONMENTAL SEAL.** Replace seal if cuts, tears, and/or deterioration is found. See figure 3.

Support Equipment Required

None

Materials Required

Nomenclature

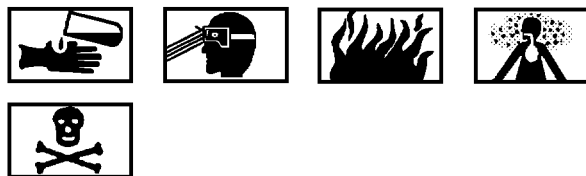
Specification or Part Number

Adhesive	RTV-106
Cheesecloth	CCC-C-440, Type 1, Class 1
Isopropyl Alcohol	TT-I-735, Grade A
Methyl Ethyl Ketone	TT-M-261
Paper, Abrasive	A-A-1047, Grit 320 - 9x11
Primer, Rubber	SS4004
Seal, Rubber-Nose	74A311026-2001
Radome, Environmental	

a. Open radome (A1-F18AC-LMM-010).

b. Remove damaged seal.

c. Remove any residual adhesive and/or seal from seal retainers by lightly sanding with 320 grit abrasive paper.



Methyl Ethyl Ketone

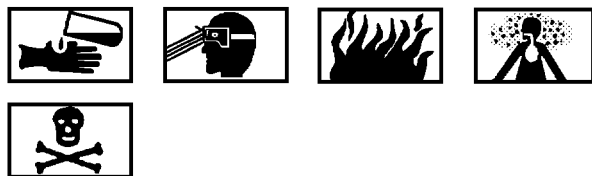
5

d. Clean area with clean cheesecloth moistened with methyl ethyl ketone.

e. Touch up finish system as required (A1-F18AC-SRM-500, WP015 00).

f. Scuff sand finish system using 320 grit abrasive paper until the surface gloss is removed.

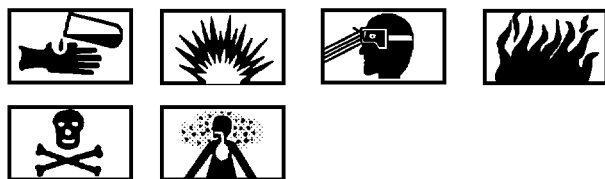
g. Thoroughly clean all surfaces to be bonded by wiping with clean cheesecloth moistened with methyl ethyl ketone.



Isopropyl Alcohol

2

h. Final clean bonding surfaces by wiping with clean cheesecloth moistened with isopropyl alcohol.



Rubber Primer

3

i. Apply a single, light coat of rubber primer using a clean cheesecloth to bond areas on seal retainers.

j. Allow rubber primer to air dry for 1 hour.



Adhesive

12

k. Apply adhesive to bond areas on seal retainers.

l. Spread adhesive evenly using a spatula or brush.



When properly installed, seal lip must face radome mold line. Failure to install seal correctly can lead to water intrusion causing corrosion and/or equipment failure.

NOTE

Seal splice is located at lower centerline of radome. Minor trimming may be required.

m. Starting at lower centerline of radome, insert nodes on seal into the holes in seal retainers working in clockwise direction. Make sure lip of seal is facing radome mold line, detail A.

n. Press seal firmly to seal retainers with finger pressure using a progressive action starting at lower centerline of radome so air will be removed from the joining surfaces.

o. Apply adhesive to end of seal at splice.

p. Allow adhesive to cure 24 hours before closing radome.

q. Close radome (A1-F18AC-LMM-010).

Table 1. Negligible Damage Limits

Fig No Idx No	Nomen/ Repair Zone	Thickness	Scratch Depth	Nicks Gouges		Dents Depth	Rivet Tilt
				Depth	Area		
Fig 1 (1)	Support Zone A3 Zone B3	0.080	0.002	0.002	100%		NA
		0.090	0.0006	0.0006	100%		NA
		0.050	0.0006	0.0006	100%		NA
		0.070	0.0006	0.0006	100%		NA
		0.130	0.0006	0.0006	100%		NA
	Zone C3	0.130	0.0006	0.0006	100%		NA

Table 1. Negligible Damage Limits (Continued)



















Fig No Idx No	Nomen/ Repair Zone	Thickness	Scratch Depth	Nicks Gouges		Dents Depth	Rivet Tilt
				Depth	Area		
Fig 1 (2)	Strap Zone A1	0.071	0.002	0.002	100%	0.035	10%
Fig 1 (6)	Hinge Link Zone C3	ALL	0.0006	0.0006	100%		NA
Fig 1 (7)	Hinge Link Zone C3	ALL	0.0006	0.0006	100%		NA
Fig 1 (9)	Former Zone A3	0.071	0.002	0.002	100%	0.020	NA
Fig 1 (10)	Support Zone B3	ALL	0.0006	0.0006	100%		NA
Fig 1 (12)	Support Zone B3	ALL	0.0006	0.0006	100%		NA
Fig 1 (13)	Stop Zone B3	0.063	0.006	0.0006	100%	0.025	NA
Fig 1 (14)	Retainer Zone A3	0.040	0.002	0.002	100%	0.020	NA
Fig 1 (15)	Support Zone B3	ALL	0.0006	0.0006	100%		NA
Fig 1 (16)	Former Zone C2	ALL	0.0006	0.0006	100%	0.030	NA
Fig 1 (17)	Former Zone D2	ALL	0.0006	0.0006	100%	0.030	NA
Fig 1 (18)	Retainer Zone A3	0.040	0.002	0.002	100%		NA
Fig 1 (19)	Former Zone C2	ALL	0.0006	0.0006	100%		NA
Fig 1 (22)	Former Zone C3	ALL	0.0006	0.0006	100%		NA
Fig 1 (24)	Former Zone B3	ALL	0.0006	0.0006	100%	0.035	NA

Table 1. Negligible Damage Limits (Continued)

Fig No Idx No	Nomen/ Repair Zone	Thickness	Scratch Depth	Nicks Gouges		Dents Depth	Rivet Tilt
				Depth	Area		
<div>NOTE</div> <div><div><div>1</div></div>None allowed.</div>							

Table 2. Repairable Damage Limits After Blending

Fig No Idx No	Nomen/ Repair Zone	Thickness	Scratch Depth	Nicks Gouges		Corrosion	
				Depth	Area	Depth	Area
Fig 1 (1)	Support Zone A3 Zone B3	0.080	0.016	0.016	10%	0.016	10%
		0.090	0.018	0.018	10%	0.018	10%
		0.050	0.010	0.010	10%	0.010	10%
		0.070	0.014	0.014	10%	0.014	10%
	Zone C3	0.130	0.025	0.025	10%	0.025	10%
Fig 1 (2)	Strap Zone A1	0.071	0.014	0.014	90%	0.014	90%
Fig 1 (6)	Hinge Link Zone C3	-					
Fig 1 (7)	Hinge Link Zone C3	-					
Fig 1 (9)	Former Zone A3	0.071	0.014	0.014	10%	0.014	10%
Fig 1 (10)	Support Zone B3	0.080	0.016	0.016	10%	0.016	10%
Fig 1 (12)	Support Zone B3	0.080	0.016	0.016	10%	0.016	10%
Fig 1 (13)	Stop Zone B3	0.063	0.012	0.012	10%	0.012	100%
Fig 1 (14)	Retainer Zone A3	0.040	0.008	0.008	10%	0.008	10%
Fig 1 (15)	Support Zone B3	0.100	0.020	0.020	10%	0.020	10%

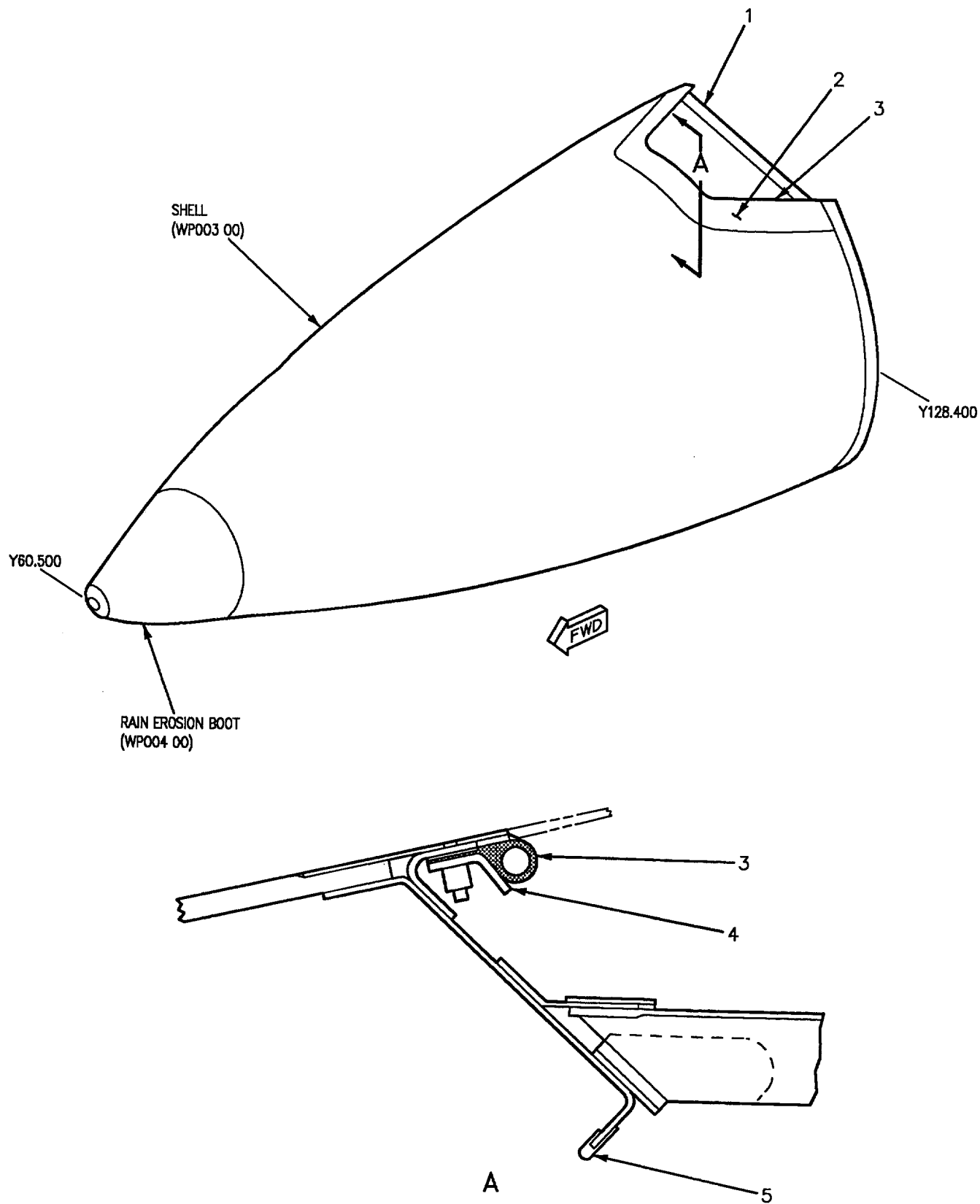


Figure 1. Material Index (Sheet 1)

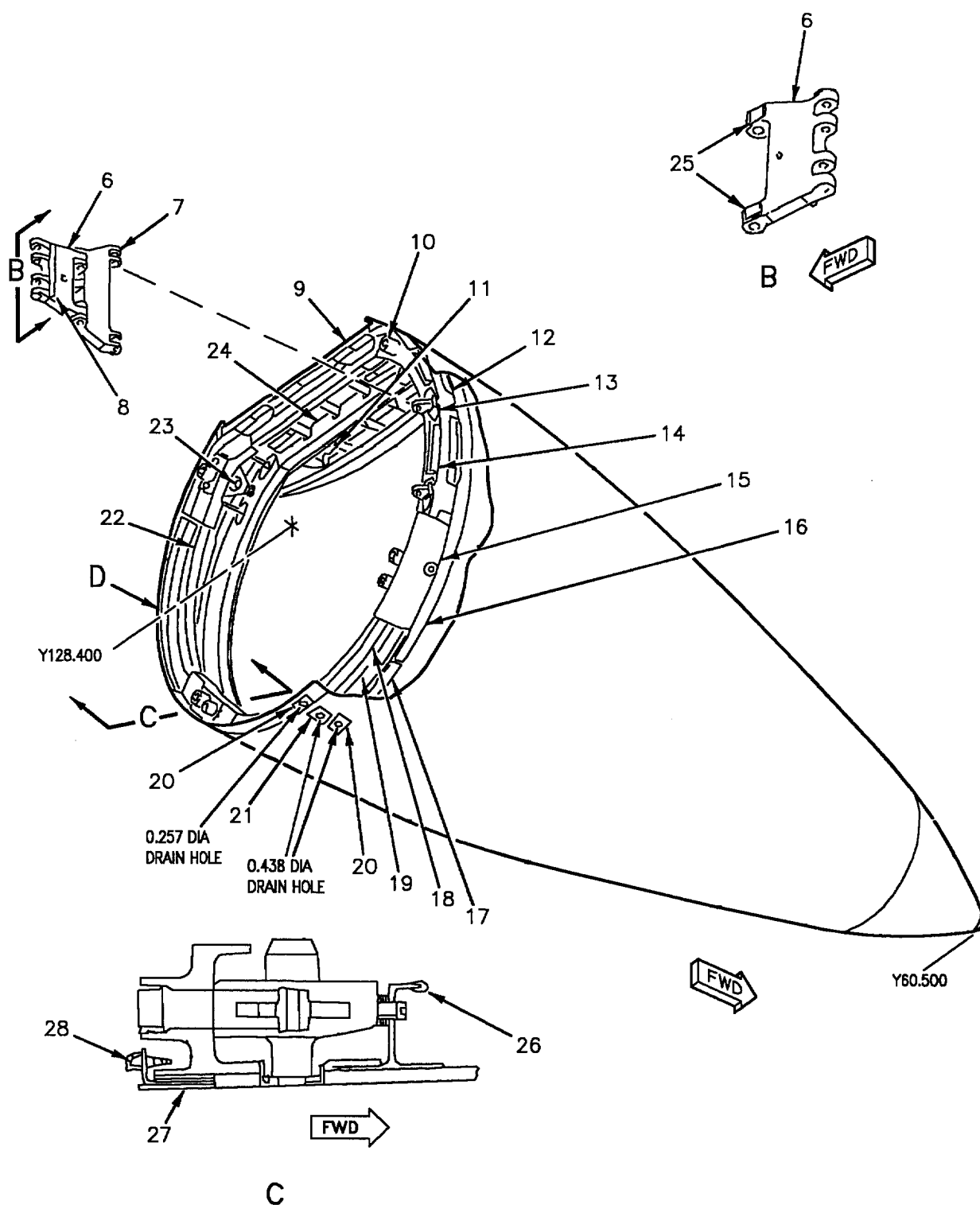


Figure 1. Material Index (Sheet 2)

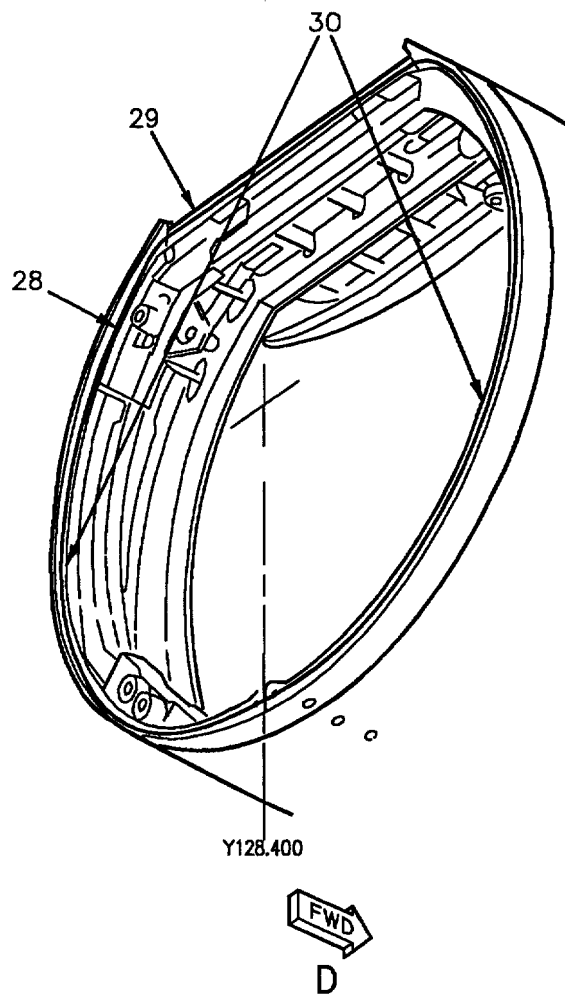


Figure 1. Material Index (Sheet 3)

IDX NO.	EFT	NOMENCLATURE AND PART NO.	DESCRIPTION	MATERIAL
1		Support 4A311014-2003	1.50 Plate	7075-T7351 Al Aly
2		Strap 74A311001-2013	0.071 Sheet	7075-T6 Alclad
3		Seal 74A311001-2061	11M 1006-1 Extr	Silicone Rubber
4		Retainer Assy 74A311001-2033	0.0400 Sheet	7075-T6 Alclad
5		Bumper 74A311001-2055	11M959-2 Extr	Rubber
6		Hinge link 74A311032-2005	Machining	7075-T73 Al Aly
7		Hinge link 74A311033-2005	Machining	7075-T73 Al Aly
8		Stop 74A311032-2003	0.250 Sheet	Silicone Rubber
9		Former 74A311008-2005	0.071 Sheet	7075-T6 Alclad
10		Support 74A311015-2002, -2001	Pressing	7075-T73 Al Aly
11		Drain Adapter 74A315044-1005, -1006	Welding	6061-T6 Al Aly
12		Support 74A311031-2003	Pressing	7075-T73 Al Aly
13		Stop 74A311001-2047, -2045	0.063 Sheet	7075-T6 Alclad
14		Retainer 74A311028-2013, -2005	0.040 Sheet	7075-T6 Alclad
15		Support 74A311021-2002, -2001	Pressing	7075-T73 Al Aly
16		Former 74A311010-2004, -2003	2.25 Plate	6Al-4v Ti Anl
17		Former 74A311020-2001	0.080 Sheet	6Al-4v Ti Anl
18		Retainer 74A311028-2003	0.040 Sheet	7075-T6 Alclad
19		Former 74A311017-2001	1.25 Plate	7075-T7351 Al Aly
20		Cover 74A311001-2057	0.040 Sheet	7075-T6 Alclad
21		Cover 74A311001-2059	0.040 Sheet	7075-T6 Alclad

Figure 1. Material Index (Sheet 4)

IDX NO.	EFT	NOMENCLATURE AND PART NO.	DESCRIPTION	MATERIAL
22		Former 74A311011-2003	1.25 Plate	7075-T7351 Al Aly
23	<div>1</div> <div>2</div> <div>1</div> <div>2</div>	Latch, Upper <div>3</div> TL12015-105 <div>3</div> TL12098-101 Latch, Lower <div>3</div> TL12015-107 <div>3</div> TL12098-103	-	-
24		Former 74A311009-2003	0.071 Sheet	7075-T6 Alclad
25		Stop 74A311032-2007	0.094 Sheet	Silicone Rubber
26		Bumper 74A311001-2053	11M959-2 Extr	Rubber
27		Strap 74A311001-2015, -2016	0.071 Sheet	7075-T6 Alclad
28		Seal 74A311026-2001	<div>4</div>	Silicone Rubber
29		Seal Retainer 74A311006-2001	1MA100D01-10270 Extr	7075-T76 Al Aly
30		Seal Retainer 74A311028-2015, -2016	0.040 Sheet	7075-T6 Alclad
LEGEND <div>1</div> 161353 THRU 161522. <div>2</div> 161523 AND UP. <div>3</div> Two required. <div>4</div> ZZ-R-765, Class IIIB, Grade 50.				

Figure 1. Material Index (Sheet 5)

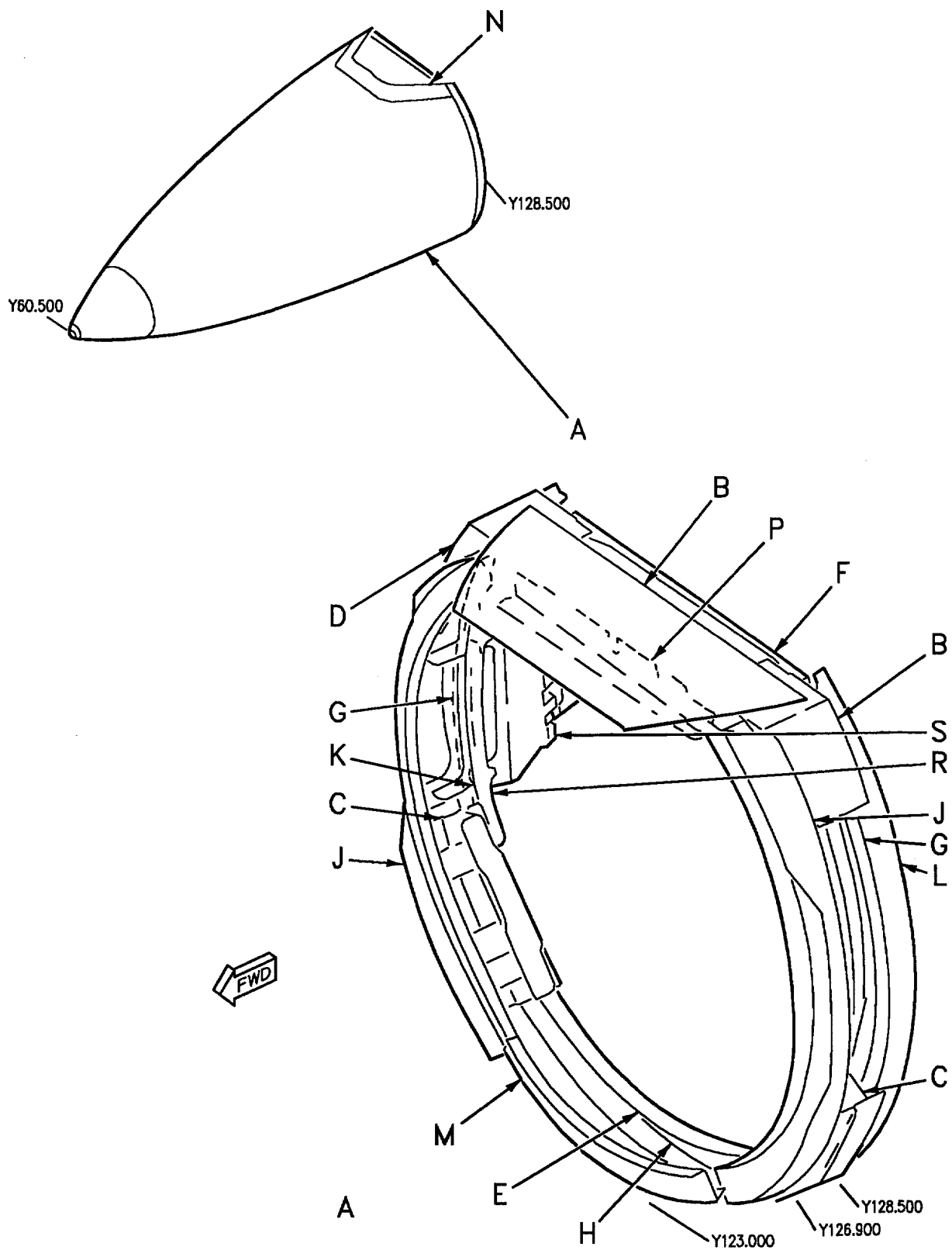


Figure 2. Repair Zones (Sheet 1)

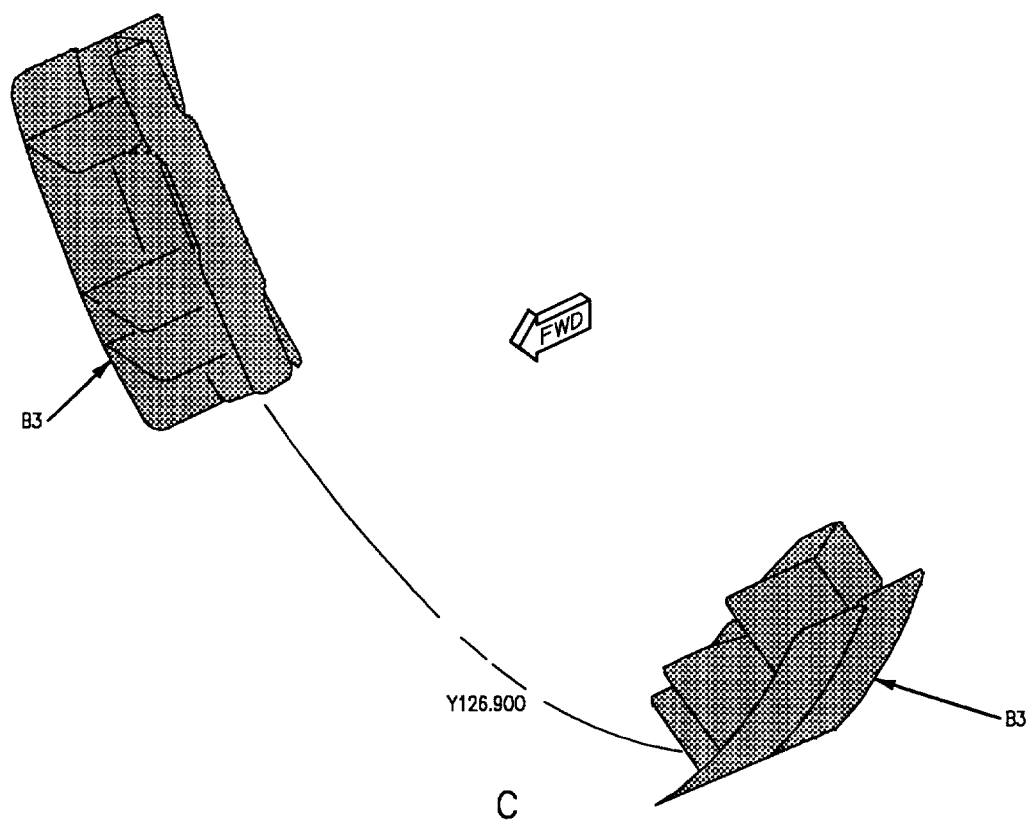
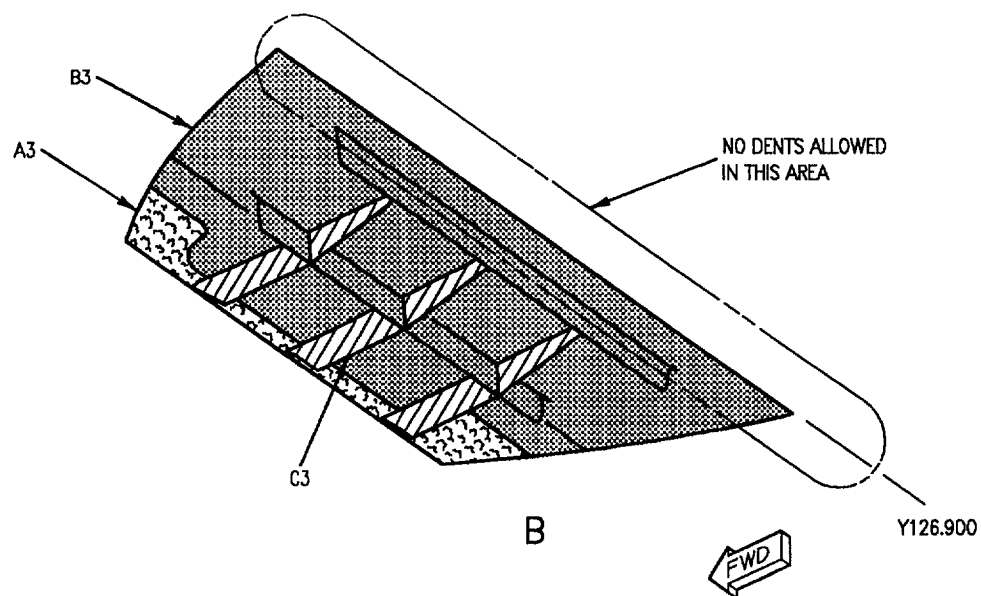


Figure 2. Repair Zones (Sheet 2)

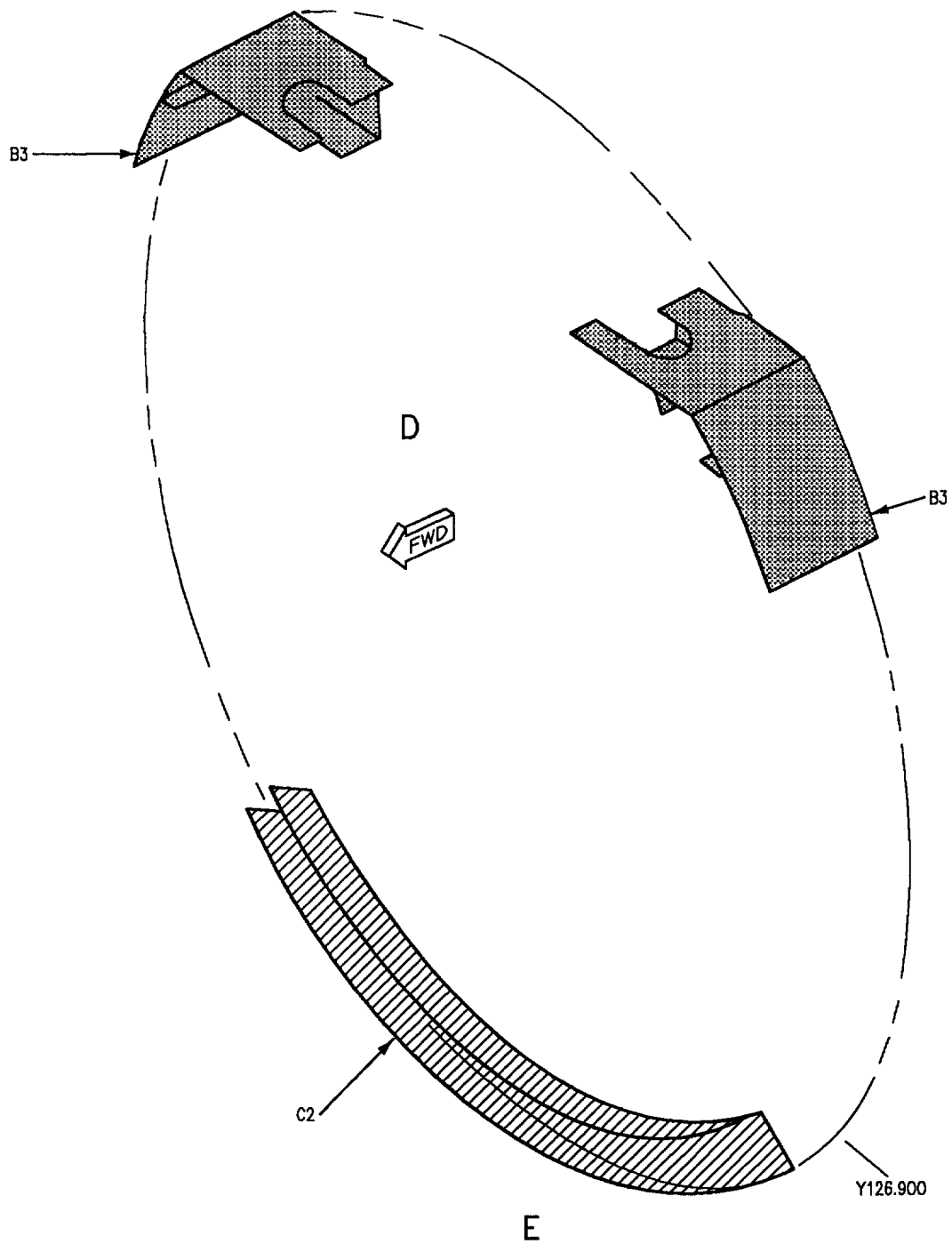


Figure 2. Repair Zones (Sheet 3)

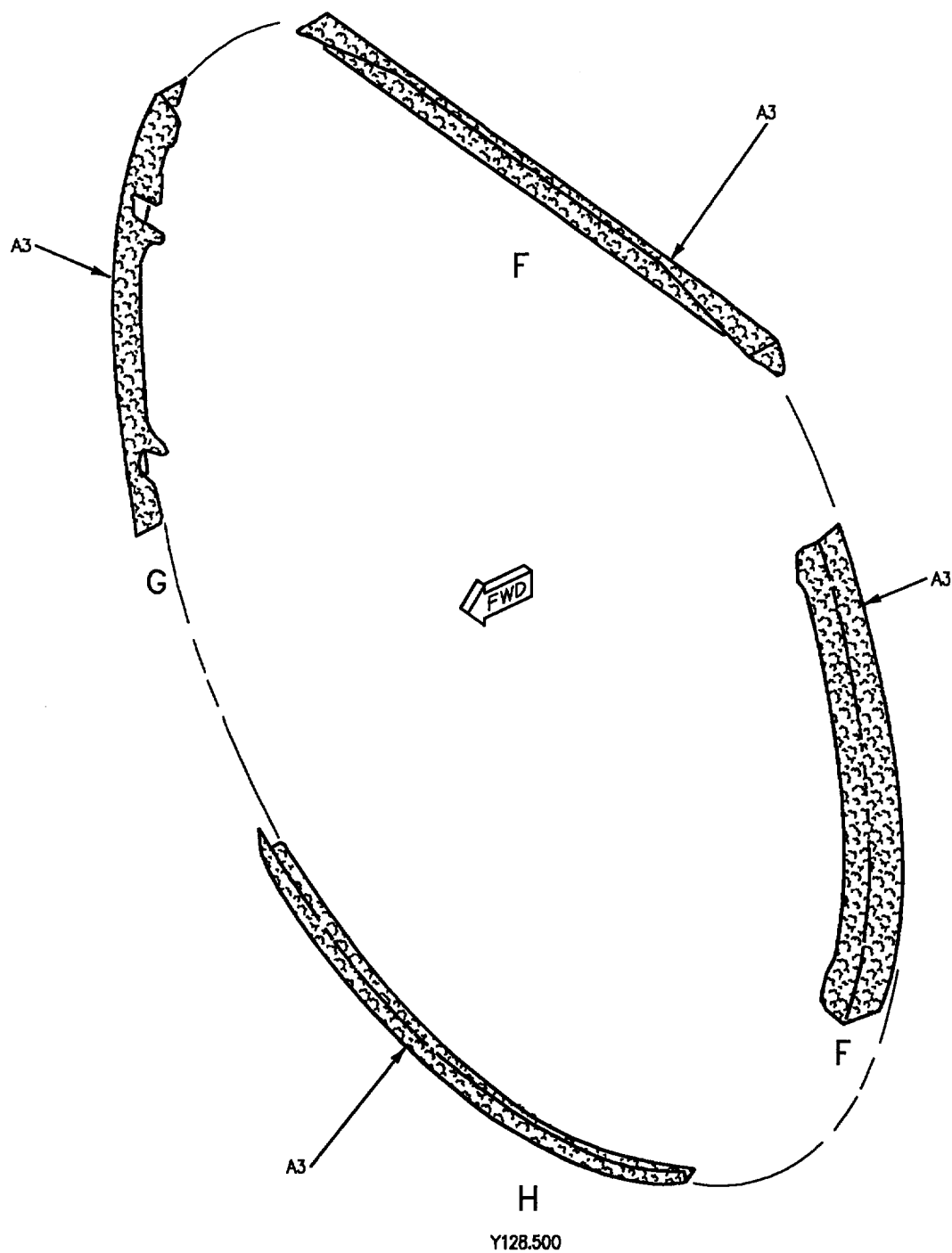


Figure 2. Repair Zones (Sheet 4)

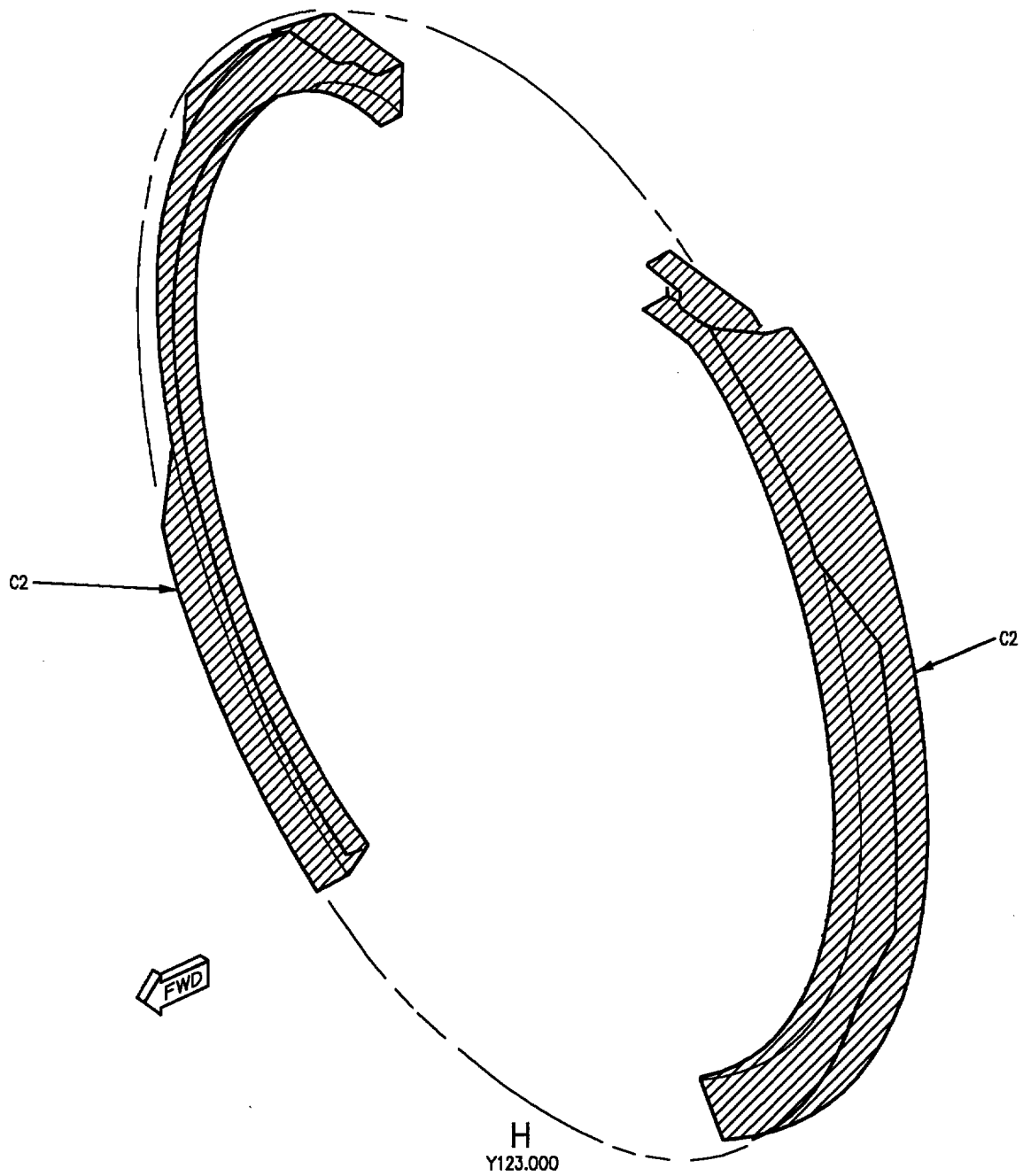


Figure 2. Repair Zones (Sheet 5)

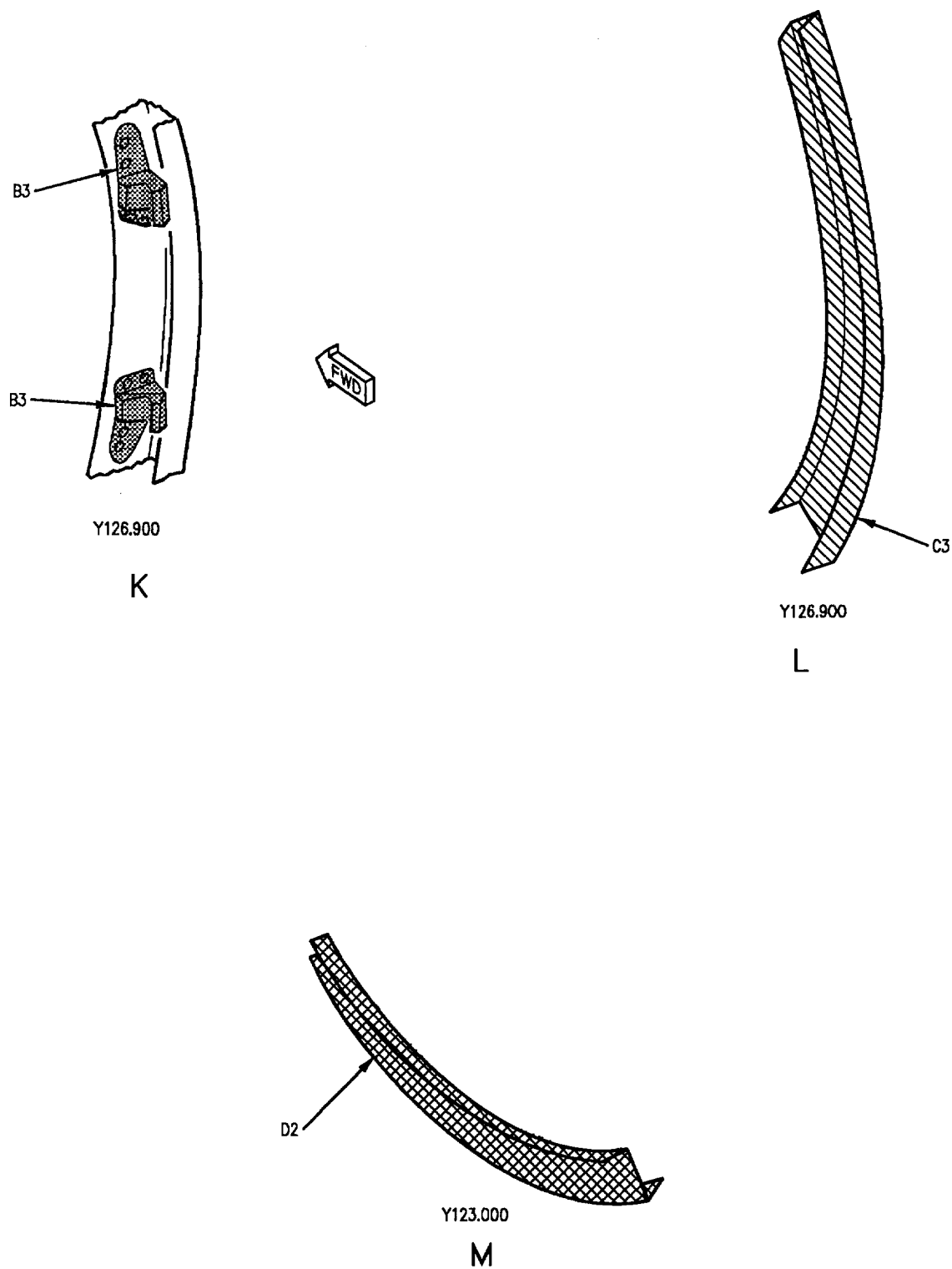


Figure 2. Repair Zones (Sheet 6)

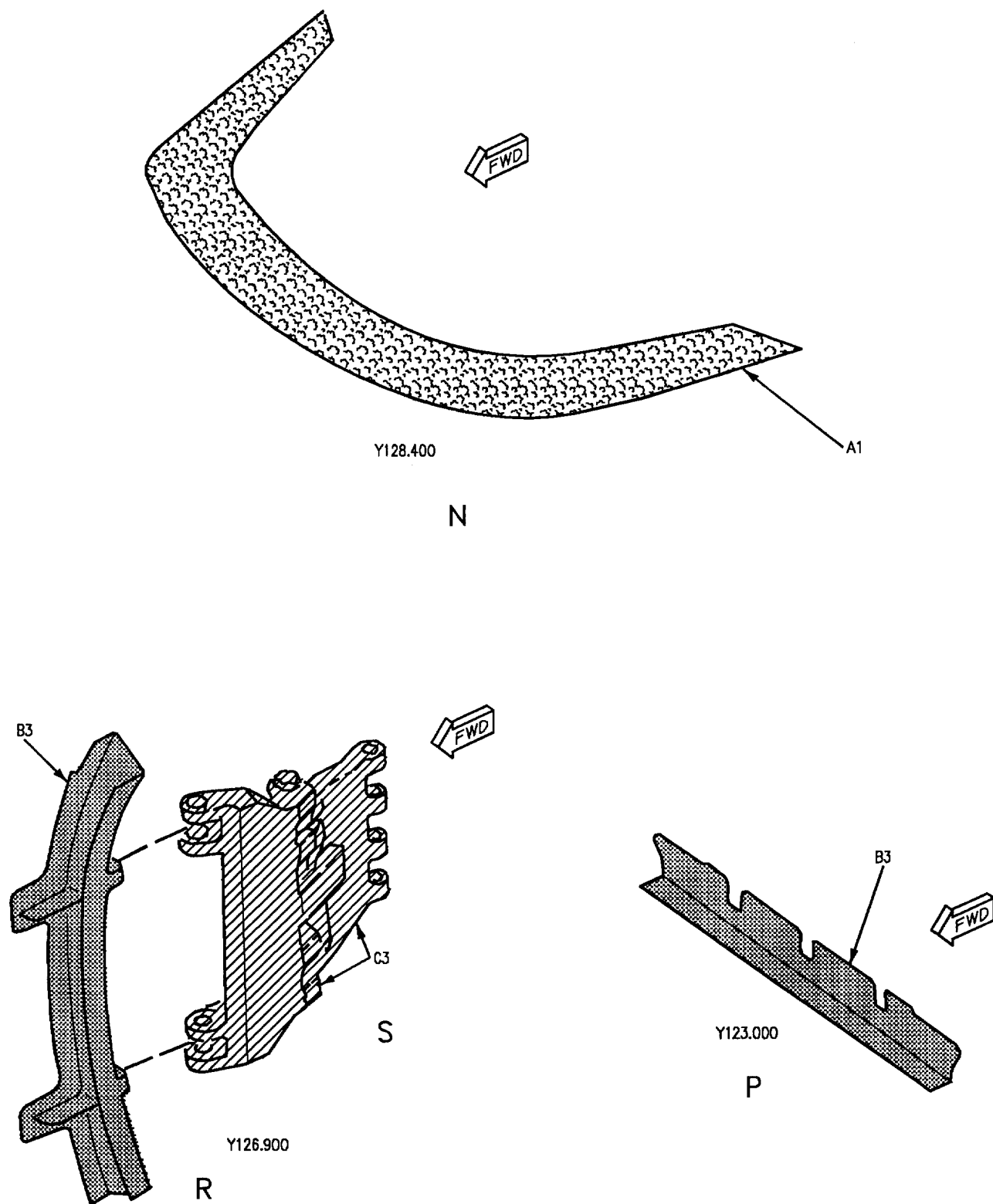


Figure 2. Repair Zones (Sheet 7)

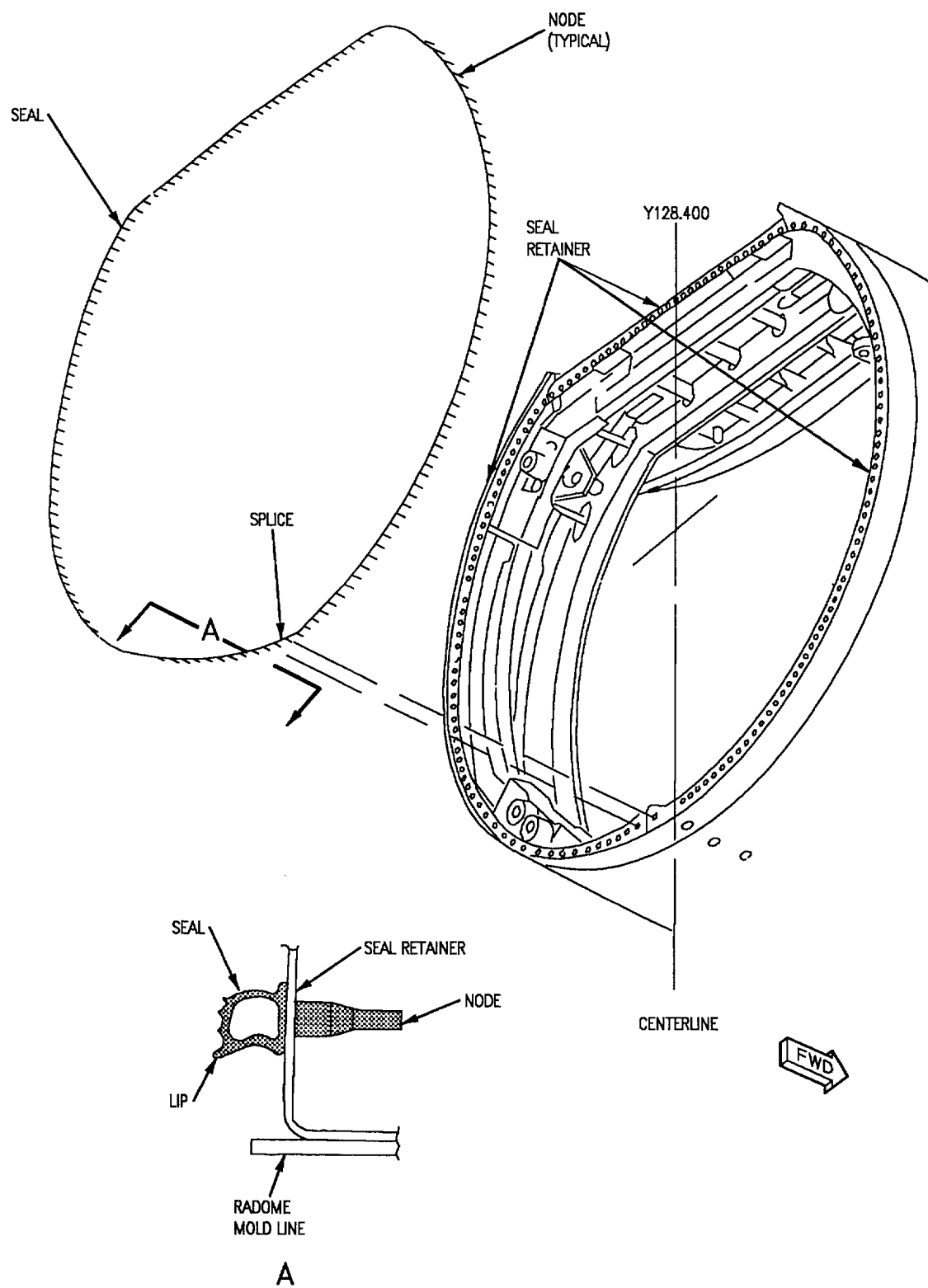


Figure 3. 74A311026 Environmental Seal Replacement

00302003

ORGANIZATIONAL MAINTENANCE

STRUCTURE REPAIR

RADOME REPLACEMENT

Reference Material

Line Maintenance Access Doors	A1-F18AC-LMM-010
Radar System	A1-F18AC-742-300
Extension and Stowage of Radar Set AN/APG-65 and Panel Screw	
Assembly Repair Radar System	WP003 00
Structure Illustrated Parts Breakdown, Forward Fuselage	A1-F18AC-SRM-420
Radome - Fuselage Nose Section, Instl of, 161353 THRU 163782	FIG005 00
Radome - Fuselage Nose Section, Instl of, 163985 AND UP	FIG005 01
Radome - Fuselage Nose Section, Assy of, 191353 THRU 163782	FIG006 00
Radome - Fuselage Nose Section, Assy of, 163985 AND UP	FIG006 01

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Rigging	2

Record of Applicable Technical Directives

None

1. **REPLACEMENT.** See figure 1.**Materials Required**

None

Support Equipment Required

Nomenclature	Part Number or Type Designation
Cover, Antenna	74D740001-1001
Torque Wrench, 0 to 600 Inch-Pounds	-

2. **REMOVAL.**

- a. Open radome (A1-F18AC-LMM-010).
- b. Install antenna cover.
- c. Remove cotter pin (6) from bolt (1).
- d. Remove nut (5) and washer (4).

e. While supporting radome, remove bolt (1), washer (2), bushing (3), and washer (7).

f. Remove radome and place in suitable holding fixture.

3. INSTALLATION.

a. For radome attaching hardware, (A1-F18AC-SRM-420, FIG005 00 or FIG005 01).

b. Align holes in radome hinge with holes in hinge link and insert washer (7).

c. Support radome and install bushing (3) into radome hinge and hinge link.

d. Install bolt (1) with washer (2) under bolt head.

e. Install nut (5) with washer (4) under nut head.

f. Install cotter pin (6) into bolt (1).

g. Rig radome; refer to Rigging, this WP.

4. RIGGING.

a. Set nominal position of adjustable bushing by rotating adjustment nut clockwise or counterclockwise until face of bushing is 1.28 ± 0.020 inch from former surface, detail B.

b. Close radome and make sure aft environmental seal is contacting former surface.

c. Lock all four rotary latches and verify that each rotary latch cam freely engages the eye of latch striker and initial locking torque does not exceed 250 inch-pounds.

d. If initial locking torque exceeds 250 inch-pounds, open radome and rotate adjustment nut counterclockwise.

NOTE

A rotation of adjustment nut 90° counterclockwise will move the eye of latch striker forward approximately 0.005 inch, reducing locking torque.

e. Repeat rotation of adjustment nut in 90° increments as required until locking torque for all four rotary latches are within tolerance.

f. Close radome and lock all four rotary latches.

g. Verify unlocking torque of each rotary latch individually while the other three rotary latches remain locked.

NOTE

Unlocking torque should be noted just before rotary latch cam initially breaks free and starts rotating counterclockwise.

h. The unlocking torque of each rotary latch must be 150 - 200 inch-pounds.

i. If adjustments must be made to meet required unlocking torque, open radome and rotate adjustment nut as follows:

NOTE

A rotation of adjustment nut 90° clockwise will move the eye of latch striker aft approximately 0.005 inch.

(1) For torque values less than 150 inch-pounds, rotate adjustment nut clockwise in 90° increments as required until torque to unlock rotary latch is within tolerance.

NOTE

A rotation of adjustment nut 90° counterclockwise will move the eye of latch striker forward approximately 0.005 inch.

(2) For torque values more than 200 inch-pounds, rotate adjustment nut counterclockwise in 90° increments as required until torque to unlock rotary latch is within tolerance.

j. Close radome, lock all four rotary latches and verify 150 - 200 inch-pounds of unlocking torque of each rotary latch individually while the other three latches remain locked.

k. Repeat step i if any of the four rotary latches are not within tolerance.

l. Remove antenna cover.

m. Close radome (A1-F18AC-LMM-010).

5. RADOME LATCH STRIKER REPLACEMENT.

See figure 2.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Cover, Antenna	74D740001-1001
Torque Wrench, 0 to 600 Inch-Pounds	-

Materials Required

Nomenclature	Specification or Part Number
Compound, Corrosion Preventive	MIL-C-85054, Type 1
a. Open radome (A1-F18AC-LMM-010).	
b. Install antenna cover.	
c. Open door 3 (A1-F18AC-LMM-010).	
d. Extend radar set (A1-F18AC-742-300, WP003 00).	
e. Remove nut (5), washer (4) and, if installed, washer (3).	
f. Remove latch striker (1) and washer (2).	
g. For replacement latch striker and attaching hardware (A1-F18AC-SRM-420, FIG005 00 or FIG005 01).	



Corrosion Preventive Compound

13

h. Apply corrosion preventive compound to all surfaces of washer (2) before installing on latch striker (1).

i. Install washer (2) on latch striker (1).

j. Insert latch striker (1) through hole in former and rotate until flats on latch striker seat with flats in 74A313051 keeper.

NOTE

Omit washer (3) if minimum of two thread protrusion is not achieved when washer (4) and nut (5) are installed.

k. Install washer (3), washer (4), and nut (5).

l. Torque nut (5) to 200 +40 - 0 inch-pounds.

m. Stow radar set (A1-F18AC-742-300, WP003 00).

n. Close door 3 (A1-F18AC-LMM-010).

o. Rig radome; refer to Rigging, this WP.

p. Remove antenna cover.

q. Close radome (A1-F18AC-LMM-010).

6. RADOME ROTARY LATCH REPLACEMENT

See figure 3.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Cover, Antenna	74D740001-1001

Materials Required

Nomenclature	Specification or Part Number
Compound, Corrosion Preventive	MIL-C-85054, Type 1

a. Open radome (A1-F18AC-LMM-010).

b. Install antenna cover.

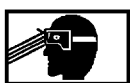
c. Remove three screws and bushings attaching latch to former. See detail A.

d. Remove latch.

e. For replacement latch and attaching hardware (A1-F18AC-SRM-420, FIG006 00, FIG006 01).

f. Install new latch.

g. Install bushings into forward side of former and into latch.



Corrosion Preventive Compound

13

h. Apply corrosion preventive compound to all surfaces of screws before installing.

i. Install two screws on forward side of structure.

j. Secure screws so that latch is snug to structure.

k. Install bushing into aft side of former and into latch.

l. Measure gap between aft surface of latch and structure.

m. Shim entire gap between latch and former to 0.000 with washers. No clearance is allowed.

n. Apply corrosion preventive coating compound to all surfaces of screw before installing.

o. Install screw.

p. Rig radome; refer to Rigging, this WP.

q. Remove antenna cover.

r. Close radome (A1-F18AC-LMM-010).

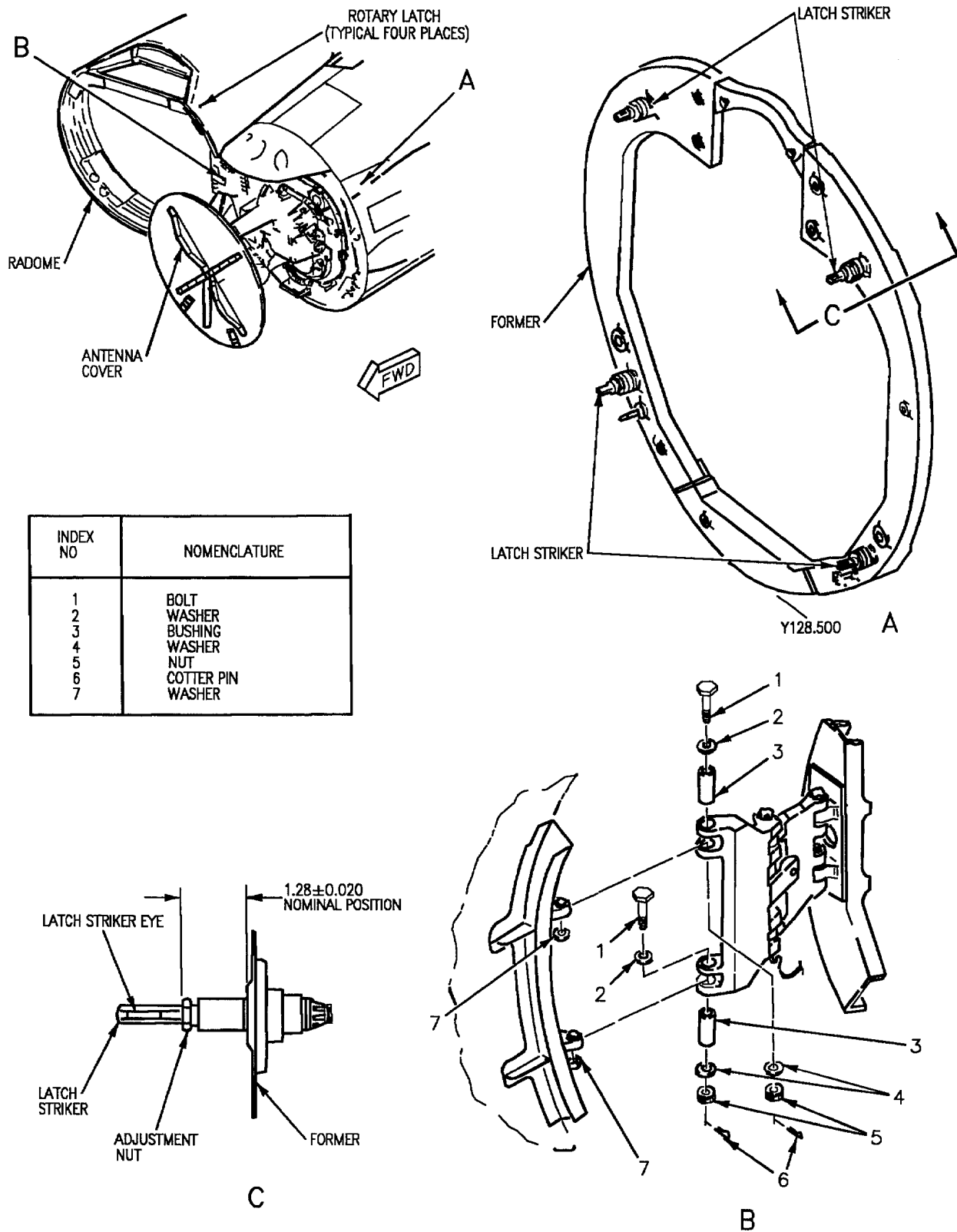


Figure 1. Radome Removal and Installation

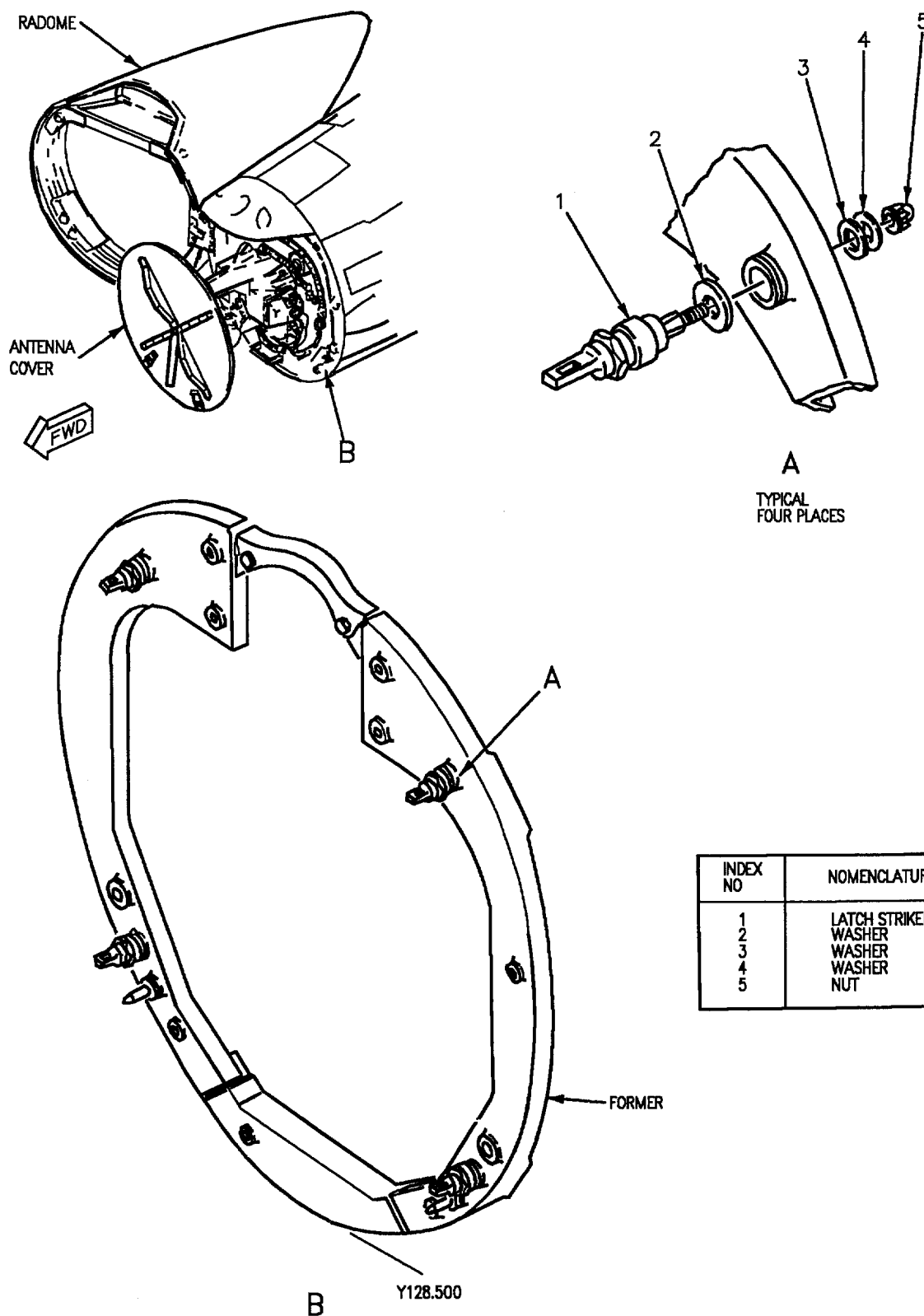


Figure 2. Radome Latch Striker Replacement

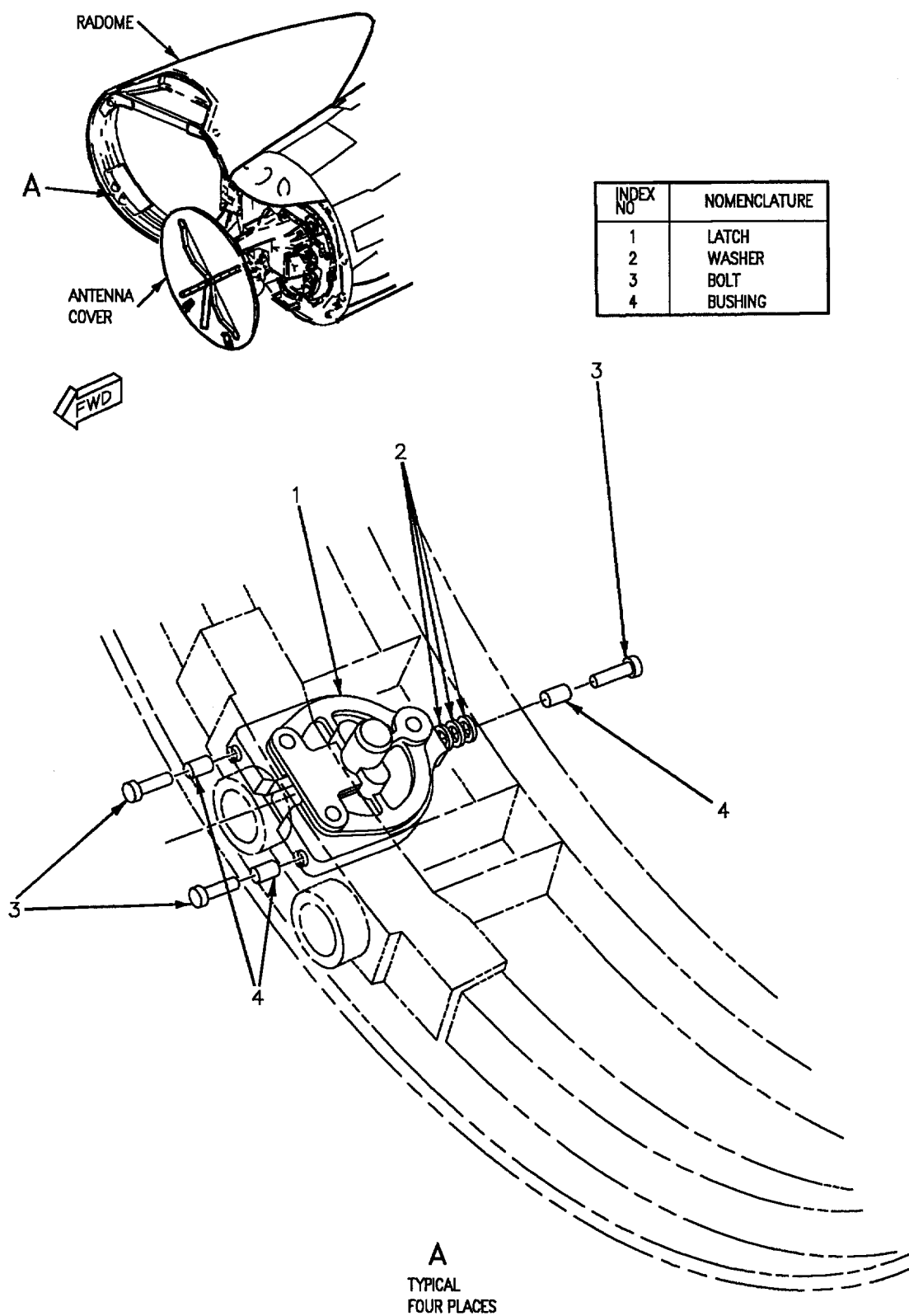


Figure 3. Radome Latch Replacement

ORGANIZATIONAL MAINTENANCE**STRUCTURE REPAIR****WINDSHIELD**

Reference Material

Windshield Component Replacement	WP004 02
Windshield Transparency Removal, Installation, and Replacement	WP004 03
Fiberglass and Aramid Components	WP038 00
Aircraft Corrosion Control	A1-F18AC-SRM-500
Windshield, Canopy, and Cockpit Finish System	WP021 00
Plane Captain Manual	A1-F18AC-PCM-000
Structure Repair, General Information	A1-F18AC-SRM-200
Introduction	WP002 00
Adhesive, Cement, and Sealant; Preparation and Application	WP011 00
Structure Repair, Typical Repair	A1-F18AC-SRM-250
Aluminum and Titanium Sheet, Formed Structure	WP033 00
Aluminum Sheet Edge Repair	WP034 00
Blending	WP038 00
Aircraft Weapons Systems Cleaning and Corrosion Control	NAVAIR 01-1A-509
Universal Optical Micrometer Kit	TO 33B4-2-10-1

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Record of Applicable Technical Directives

None

1. **STRUCTURE.**

2. **DAMAGE EVALUATION.** See figures 1 and 2. Damage is classified as negligible and repairable. Locating and determining size of damage by visual method is organizational maintenance. The types of materials used are shown on figure 1. Repair zones are shown on figure 2. Allowable damage limits within repair zones are listed in tables 1 and 2. Damage not listed or exceeding the following limits require a depot engineering disposition.

3. **Negligible Damage.** Negligible damage is damage that may be allowed to exist as is. However, preventive maintenance, for temporary corrosion arrestment, should be done to scratches (NAVAIR 01-1A-509). The types and limits of damage are listed below and in table 1. The figure and index numbers in table 1 coincide with the figure and index numbers in the material index.

a. Scratches are not allowed within one diameter from the edge of any hole.

b. Smooth dents only, effective diameter at least 20 times the depth.

4. **Repairable Damage.** The types and limits of damage are listed below and in table 2. The figure and index numbers in table 2 coincide with figure and index numbers in the material index, figure 1.

NOTE

The limits in table 2 apply after blending the damage.

a. Scratches.

(1) Scratches within one diameter of any hole must be blended out. Minimum blend out is one diameter from edge of any hole.

(2) Scratches to be blended out with diameter, or width, at surface at least 20 times the depth.

b. Nicks, gouges, and corrosion to be blended out with diameter, or width, at surface at least 20 times the depth.

c. Cracks. All cracks must be repaired.

d. Holes.

(1) Damage in areas free of structure and lands must have edge of cleanup hole at least eight repair fastener diameters from any land, internal structure or existing row of fasteners.

(2) Damage to lands, overstructure, only one repair per land.

e. Dents exceeding the limits in table 1 must be repaired.

5. **REPAIRS.** Types of repairs are temporary, one-time flight, permanent, critical area, alternate, and typical. Repair type definitions are in structure repair terms (A1-F18AC-SRM-200, WP002 00).

6. **Permanent Repairs.**

7. **Scratches, Nicks, Gouges or Corrosion.** Blend scratches, nicks, gouges, or corrosion (A1-F18AC-SRM-250, WP038 00). If after blending, the damage limits of table 2 are exceeded, repair aluminum sheet as below. Refinish blended areas (A1-F18AC-SRM-500, WP021 00).

a. Scratches - make crack or edge repair.

b. Nicks, gouges, or corrosion - make hole or edge repair.

8. **Cracks.** In zones A3 and B2, repair cracks in aluminum formed structure (A1-F18AC-SRM-250, WP033 00) as below:

a. Cut out damage.

b. Install angle or strap.

c. Refinish repaired area (A1-F18AC-SRM-500, WP021 00).

9. **Holes.** In zones A3 and B2, repair holes in aluminum formed structure (A1-F18AC-SRM-250, WP033 00) as below:

a. Cut out damage.

b. Install angle or strap.

c. Refinish repaired area (A1-F18AC-SRM-500, WP021 00).

10. **Edge.** In zone A3, repair edge damage in aluminum sheet (A1-F18AC-SRM-250, WP034 00) as below:

a. Cut out damage.

b. Install flush or lap patch.

c. Refinish repaired area (A1-F18AC-SRM-500, WP021 00).

11. **Dents.** In zones A3 and B2, repair dents in aluminum formed structure (A1-F18AC-SRM-250, WP033 00) as below:

a. Cut out damage.

b. Install angle or strap.

c. Refinish repaired area (A1-F18AC-SRM-500, WP021 00).

12. **REPLACEMENT.** For windshield structural component replacement, (WP004 02).

13. **Doubler, 74A350747, Replacement.**

Support Equipment Required

None

Materials Required

Nomenclature	Specification or Part Number
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, 0.375 Inch Thick
Sealing Compound	MIL-S-83430, Class A-1/2
Tape, Pressure Sensitive	A-A-883, Type 1, 1 inch

a. Remove windshield (A1-F18AC-120-300, WP117 00).

b. Protect entire surface inside and out with ethyl foam cushioning material attached with tape.

c. Align 74A350747-2069 doubler with windshield fairing, 74A350625, on forward inboard side of expansion slot and mate drill seven holes.

d. Align 74A350747-2071 doubler with fairing on forward inboard side of expansion slot and mate drill five holes.



Sealing Compound

7

e. Apply fay surface seal, using sealing compound, between fairing and doublers (A1-F18AC-SRM-200, WP011 00).

f. Attach forward side of doublers with MS20426AD5 rivets wet with sealing compound.

g. Place windshield on aircraft and attach to airframe. Push down on fairing to align fairing to aircraft skin contour. While maintaining contour, mark remaining holes to be drilled in doublers.

h. Remove windshield.

i. Push down on fairing to align hole marks and clamp in place.

j. Drill holes, for MS20426AD5 rivets, and deburr.

k. Apply fay surface seal, using sealing compound, between fairing and doubler (A1-F18AC-SRM-200, WP011 00).

l. Install MS20426AD5 rivets wet with sealing compound.

NOTE

To avoid damage to aircraft or windshield seal, trimming must be done before installation.

m. Trim doublers flush, as required.

n. Install windshield (A1-F18AC-120-300, WP117 00).

o. Refinish area as required (A1-F18AC-SRM-500, WP021 00).

Table 1. Negligible Damage Limits











Fig No Idx No	Nomen/ Repair Zone	Thickness	Scratch Depth	Nicks Gouges		Rivet Tilt	Dents Depth
				Depth	Area		
Fig 1 (1)	Deck Zone B3	0.070	0.0006	0.0006	100%		0.035
Fig 1 (2)	Frame Zone B2	0.070	0.0006	0.0006	100%		0.035
Fig 1 (5)	Support Zone A2	0.070	0.002	0.002	100%		0.035
Fig 1 (6)	Arch Zone C2	0.125	0.0006	0.0006	100%		0.062
Fig 1 (7)	Support Zone D2	0.065	0.0006	0.0006	100%		0.013
Fig 1 (8)	Frame Zone A3	0.090	0.002	0.0006	100%		0.018
Fig 1 (10)	Fairing Zone A3	0.063	0.002	0.0006	100%		0.031
Fig 1 (13)	Hinge Zone D2	0.120	0.0006	0.0006	100%		
NOTE  None allowed.							

Table 2. Repairable Damage Limits After Blending

Fig No Idx No	Nomen/ Repair Zone	Thickness	Scratch Depth	Nicks Gouges		Corrosion	
				Depth	Area	Depth	Area
Fig 1 (1)	Deck Zone B3	0.070	0.014	0.014	10%	0.014	10%
Fig 1 (2)	Frame Zone B2	0.070	0.014	0.014	10%	0.014	10%
Fig 1 (5)	Support Zone A2	0.070	0.014	0.014	10%	0.014	10%
Fig 1 (6)	Arch Zone C2	0.125	0.025	0.025	10%	0.025	10%

Table 2. Repairable Damage Limits After Blending (Continued)

Fig No Idx No	Nomen/ Repair Zone	Thickness	Scratch Depth	Nicks Gouges		Corrosion	
				Depth	Area	Depth	Area
Fig 1 (7)	Support Zone D2	0.065	0.013	0.013	10%	0.013	10%
Fig 1 (8)	Frame Zone A3	0.090	0.018	0.018	10%	0.018	10%
Fig 1 (10)	Fairing Zone A3	0.063	0.012	0.012	10%	0.012	10%
Fig 1 (13)	Hinge Zone D2	0.120	0.024	0.024	10%	0.024	10%

14. ACRYLIC TRANSPARENCY.

15. DAMAGE EVALUATION. Damage is classified as negligible and repairable. To determine if damage is negligible or repairable, an optical inspection is required. Damage not listed or exceeding the following limits require depot engineering disposition.

NOTE

Before evaluating damage, make sure transparency is thoroughly cleaned (A1-F18AC-PCM-000).

16. Optical Inspection.

- a. Assume pilot's position in cockpit.

NOTE

For best distortion inspection, a grid board with lines one-sixteenth of an inch wide on 1 inch centers, located approximately 15 feet from pilot's eye position, may be used.

- b. Look through transparency at grid board or an object at least 30 feet away which has distinct straight line construction.

- c. Slowly move head sideways and up and down while viewing the grid board or object through the transparency.

- d. Make note of any distortion, scratches, stains, streaks, and pitting that causes vision impairment.

17. Negligible Damage. Negligible damage is damage that may be allowed to exist as is. Types and limits are:

- a. Minor distortion, stains, and streaks.

- b. Pilot's vision is not obstructed by, or drawn to the defect.

- c. Localized distortion (bull's eye), located completely within one inch of the edging strip.

- d. Slight, gradual bending of a straight line element of the grid board or object used in optical inspection.

NOTE

Superficial scratches normally only need to be cleaned and have rain repellent applied (A1-F18AC-PCM-000).

- e. Superficial scratches that do not positively hang a fingernail on the edge.

18. Repairable Damage. Repairable damage is damage that can be permanently repaired with no adverse affect on structural integrity, flight characteristics, or safety of the aircraft. Damage types and limits are:

- a. Abrupt slope reversal of a straight line element of the grid board or object used in optical inspection.
- b. Jumping or abrupt movement of a straight line element of the grid board or object used in optical inspection.
- c. Vision impairment, defined as a condition which causes the observer to focus on the defect instead of a straight line element of the grid board or object used in optical inspection.
- d. Scratches, nicks, and gouges having sharp enough edges to positively cause hanging of a finger-nail.
- e. Cleaning damage and gun gas erosion consisting of hoopwise scratches or pitting causing unacceptable clarity or optical definition through the transparency.
- f. Damage as described in step d, within one-eighth of an inch of edging strip is unacceptable and will require depot engineering disposition.

19. REPAIRS.

20. **Acrylic Transparency Polishing.** See figure 3. Damage to transparency is repaired by polishing if thickness limits can be maintained and optic quality can be restored. To determine the depth of a defect and thickness of transparency, a universal optical micrometer kit should be used before and after each repair.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Universal Optical Micrometer Kit	966A1

Materials Required

Nomenclature	Specification or Part Number
Anti Static Cream	3MASC8
Cloth, Abrasive	1500 Micro-Mesh
Cloth, Abrasive	1800 Micro-Mesh
Cloth, Abrasive	12000 Micro-Mesh
Maintenance Kit	MIL-M-58091

Materials Required (Continued)

Nomenclature	Specification or Part Number
Micro Gloss	-
Abrasive Cream	
Plastic Cleaner	P-P-560

NOTE

Mechanic's technique and depth and nature of the defect will have an impact on time intervals required for each polishing step. Transitions in thickness must be gradual to avoid visual distortion. Spread out each blend area. The deeper the defect, the larger the blend area. The initial defect removal shall be accomplished over an extensive area and each successive step shall be blended over a progressively larger area.

For defects located within one inch of the edge strips, try to limit the area of polishing to that within one inch of the edge strips.

a. Before repairing any damage, make sure transparency is thoroughly cleaned (A1-F18AC-PCM-000).

b. Measure thickness of transparency using a universal optical micrometer (T.O. 33B4-2-10-1). Multiply all measured dimensions by a correction factor of 1.5 for stretched acrylic to obtain actual thickness. If thickness is less than 0.550-inch, transparency must be replaced.



Remove all objects such as rings, watches, belt buckles, and other items which may damage transparency.

Only hand polishing is allowed when working transparency. Use of power sanding and buffing equipment is prohibited.

The critical vision area of the transparency must never be polished with 400 or 600 grit paper; optical boresight requirements will be exceeded.

c. There are thirteen principal steps to completely polish a major defect area in a transparency. The procedure may start at any step.

NOTE

The starting grit selected should be one which leaves a scratch depth close to the defect depth.

d. Start with the finer grits and proceed to the coarser grits until the correct starting grit is determined.

e. Remove the defect using the starting grit selected.

f. All steps following the starting grit selected must be completed in order to remove polishing marks left by the previous abrasive.

g. The following is a list of steps used in transparency polishing:

NOTE

Steps 1, 2, and 3 must be performed wet.

(1) STEP 1 uses 400 grit abrasive paper around a neoprene form block with water. Use fore and aft strokes.

(2) Thoroughly clean transparency with water.

(3) STEP 2 uses 600 grit abrasive paper around a neoprene form block with water. Use fore and aft strokes for approximately 3 minutes per square foot.

(4) Thoroughly clean transparency with water.

(5) STEP 3 uses 1500 (purple) micro-mesh cloth around a neoprene form block with water. Use fore and aft strokes for approximately 3 minutes per square foot.

(6) Thoroughly clean transparency with water.

NOTE

Polishing steps 4 through 11 can be performed wet or dry. It is easier to see progress of the surface restoration if the micro-mesh cloth is dry. The powdered particles of the transparency settle into the scratches and appear as white streaks. These streaks are easily seen and polishing is continued until the streaks are removed.

(7) STEP 4 uses 1800 (pink) micro-mesh cloth around a neoprene form block. Use fore and aft strokes for approximately 3 minutes per square foot.

(8) Thoroughly clean transparency with water.

NOTE

When using the dry procedure, frequently slap the micro-mesh cloth with your hand to loosen the abraded, powdered acrylic particles from the cloth.

(9) STEP 5 uses 2400 (white) micro-mesh cloth around a neoprene form block. Use fore and aft strokes applying medium pressure for approximately 3 minutes per square foot.



Plastic Cleaner

14

(10) Thoroughly clean transparency with clean cloth and plastic cleaner using fore and aft strokes. Dry the surface with clean, dry cloth.

(11) STEP 6 uses 3200 (blue) micro-mesh cloth around a neoprene form block. Use fore and aft strokes for approximately 2 minutes per square foot.

NOTE

The 3200 micro-mesh cloth used in STEP 6 leaves a finer scratch pattern than the 2400 micro-mesh cloth used in STEP 5.

(12) Thoroughly clean transparency with clean cloth and plastic cleaner using fore and aft strokes. Dry the surface with clean, dry cloth.

(13) STEP 7 uses 3600 (green) micro-mesh cloth around a neoprene form block. Use fore and aft strokes for approximately 2 minutes per square foot.

(14) Thoroughly clean transparency with clean cloth and plastic cleaner using fore and aft strokes. Dry the surface with clean, dry cloth.

(15) STEP 8 uses 4000 (yellow) micro-mesh cloth around a neoprene form block. Use fore and aft strokes for approximately 2 minutes per square foot.

NOTE

The 4000 micro-mesh cloth used in STEP 8 will leave a very fine scratch pattern after polishing.

(16) Thoroughly clean transparency with clean cloth and plastic cleaner using fore and aft strokes. Dry the surface with clean, dry cloth.

(17) STEP 9 uses 6000 (gold) micro-mesh cloth around a neoprene form block. Use fore and aft strokes for approximately 1 - 1/2 minutes per square foot.

(18) Thoroughly clean transparency with clean cloth and plastic cleaner using fore and aft strokes. Dry the surface with clean, dry cloth.

NOTE

No scratch pattern should remain on the surface of transparency after STEP 9. A hazed appearance should appear.

(19) STEP 10 uses 8000 (maroon) micro-mesh cloth around a neoprene form block. Use fore and aft strokes for approximately 1 - 1/2 minutes per square foot, except if the area being worked exhibits a pattern effect in fore and aft direction from previous polishing operations.

Then use alternating 15 second intervals of vertical hoop strokes and horizontal fore and aft strokes to remove the pattern. Use very light pressure on this step.

(20) Thoroughly clean transparency with clean cloth and plastic cleaner using fore and aft strokes. Dry the surface with clean, dry cloth.

(21) STEP 11 uses 12000 (gray) micro-mesh cloth around a neoprene form block. Use fore and aft strokes for approximately 1 - 1/2 minutes per square foot, except if the area being worked exhibits a pattern effect in fore and aft direction from previous polishing operations. Then use alternating 15 second intervals of vertical hoop strokes and horizontal fore and aft strokes to remove the pattern. Use very light pressure on this step.

(22) Thoroughly clean transparency with clean cloth and plastic cleaner using fore and aft strokes. Dry the surface with clean, dry cloth.



Abrasive Cream

15

(23) STEP 12 uses micro gloss abrasive cream. Mix approximately one part of cream with four parts clean water. Thoroughly shake the cream mixture before use. Put mixture on clean cotton cloth previously dampened with clean water. Use fore and aft strokes for approximately one minute per square foot.

(24) Clean transparency with clean cotton cloth moistened with clean water. Dry the surface with clean, dry cotton cloth.



Anti Static Cream

16

(25) STEP 13 uses anti-static cream. Apply a thin film to transparency surface using fore and aft strokes. Hand buff the transparency dry with clean, dry cotton cloth using fore and aft strokes.

(26) Apply rain repellent coating (A1-F18AC-PCM-000).

(27) Measure thickness of transparency using universal optical micrometer (T.O. 33B4-2-10-1). Multiply all measured dimensions by a correction factor of 1.5 for stretched acrylic to obtain actual thickness. If thickness is less than 0.550 inch, transparency must be replaced.

(28) Perform optical inspection procedure in paragraph 15. If any defect is visible, repeat whatever steps are necessary to eliminate the defect.

21. Edging Strip Repair. Phenolic edging strips were installed on aircraft 161353 thru 162399. Erosion of phenolic strips may occur as a result of wind, rain, or hail. Damage that is less than 50 percent of edging strip thickness is repaired by filling damage and installing repair strap per paragraph 21. Damage that is more than 50 percent of edging strip thickness is repaired by removing existing phenolic edging strip and installing a metal edging strip per paragraph 22.

22. Damage Less Than 50 Percent of Edging Strip Thickness. See figure 4.

Support Equipment Required

Nomenclature	Part Number or Type Designation
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Torque Wrench, 0 to 60 Inch-Pounds	-
------------------------------------	---

Materials Required

Nomenclature	Specification or Part Number
Adhesive	EA9321 A/B
Bolt (38)	NAS663V16HT
Bolt (4)	NAS663V18HT
Bolt (1)	NAS663V22HT
Cheesecloth	CCC-C-440, Type 1, Class 1
Cleaning Compound	PR146 Blue
Cloth, Nylon Scrim Cloth	Pattern 30
Filler Washer (43)	4M119D6
Isopropyl Alcohol	TT-I-735, Grade A
Paper, Abrasive	A-A-1047 Grit 240-9x11, Grit 320-9x11
Primer, Adhesive	PR142
Sealing Compound	PR-1725, B-2
Tape, Pressure Sensitive	855-1.000 inch

a. Mask transparency next to phenolic edging strip.

b. Remove 43 fasteners where transparency attaches to windshield arch.



Use care not to sand into acrylic transparency while removing damaged fibers.

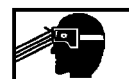
c. Remove any erosion damage, delaminations, or extruding fibers by sanding with 240 grit abrasive paper.



Isopropyl Alcohol

2

d. Clean damaged area using clean cheesecloth moistened with isopropyl alcohol.



Adhesive

17

e. Prepare EA9321 A/B adhesive (A1-F18AC-SRM-200, WP011 00).

f. Fill damaged area to edging strip mold line with adhesive adding excess adhesive to allow for shrinkage.

g. Cure adhesive (A1-F18AC-SRM-200, WP011 00).



Use care not to sand into acrylic transparency causing damage.

h. Sand repair area flush with edging strip mold line using 240 grit abrasive paper.

i. Bond 4M119D6 filler washers in all countersinks using EA9321 A/B adhesive.

j. Fabricate repair strap per figure 4.

k. Clean repair strap by wiping with clean cheesecloth moistened with isopropyl alcohol.

l. Abrade bonding surface of repair strap to a satin finish using 320 grit abrasive paper.

m. Clean bonding surface of repair strap with clean, dry cheesecloth.



Cleaning Compound

18

n. Use a clean, dry cheesecloth to apply a thin coat of PR146 Blue cleaning compound to bonding surface or repair strap.

o. Clean phenolic edging strip with clean cheesecloth moistened with isopropyl alcohol.

p. Abrade bonding surface of phenolic edging strip using 320 grit abrasive paper.

q. Remove sanding dust by wiping with clean, dry cheesecloth.



Adhesive Primer

19

r. Use a clean, dry cheesecloth to apply a thin coat of primer PR 142 to area on phenolic edging strip where repair strap will be installed.



Sealing Compound

20

s. Prepare PR-1725, B-2 sealing compound.

t. Apply a thin coat of sealing compound to surfaces being bonded.

u. Install scrim cloth between bonding surfaces to control bond line thickness.

v. Position repair strap on phenolic edging strip.



Use care not to tighten clamps excessively. Damage to transparency may result.

w. Install clamps applying sufficient pressure to force out air and excessive sealing compound.

x. Remove excessive sealing compound with cheesecloth dampened with isopropyl alcohol.

y. Cure sealing compound for 25 hours before removing clamps.



Use extreme care when back drilling not to damage holes in acrylic transparency.

z. Back drill 0.195 +0.007 -0.000 inch diameter holes in repair strap, 43 places, using existing holes in 74A350604 arch as guide.

aa. Countersink holes in repair strap to flushness requirement of fastener.

ab. Wet install fasteners using PR-1725 B-2 (A1-F18AC-SRM-200, WP011 00), 43 places, detail F.

ac. Torque fasteners to 30-35 inch-pounds.

ad. Apply finish system as required (A1-F18AC-SRM-500, WP021 00).

23. Damage More Than 50 Percent of Edging Strip Thickness. See figure 5.

Support Equipment Required

Nomenclature	Part Number or Type Designation
--------------	---------------------------------

Torque Wrench, 0 to 60
Inch-Pounds

-

Materials Required

Nomenclature	Specification or Part Number
Cheesecloth	CCC-C-440, Type 1, Class 1

Materials Required (Continued)

Nomenclature	Specification or Part Number
Cleaning Compound	PR146 Blue
Cloth, Nylon Scrim	Pattern 30
Edging Strip	74A350635-2001
Isopropyl Alcohol	TT-I-735, Grade A
Paper, Abrasive	A-A-1047 Grit 240-9x11 Grit 320-9x11
Primer, Adhesive	PR142
Sealing Compound	PR-1725, B-2
Tape, Pressure	855-1.000 inch Sensitive

a. Mask transparency next to phenolic edging strip.

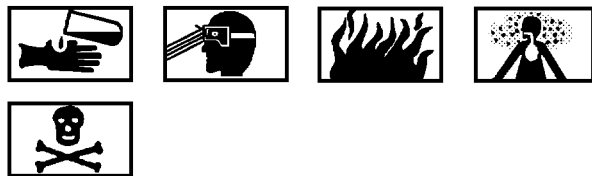
b. Remove 43 fasteners where transparency attaches to windshield arch.

c. Remove damaged phenolic edging strip by peeling from acrylic transparency.



Use care not to sand into acrylic transparency while removing residual adhesive and/or phenolic fibers.

d. Remove any residual adhesive and/or phenolic edging strip by lightly sanding surface with 240 grit abrasive paper.



Isopropyl Alcohol

2

e. Clean area where phenolic edging strip was removed using clean cheesecloth moistened with isopropyl alcohol.

f. Abrade bonding surface of 74A350635 edging strip to a satin finish using 320 grit abrasive paper.

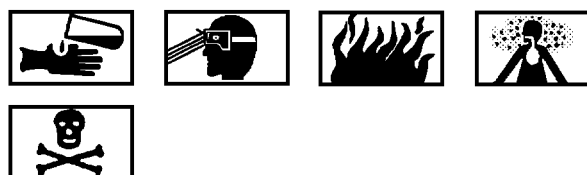
g. Clean bonding surface of edging strip with a clean, dry cheesecloth.



Cleaning Compound

18

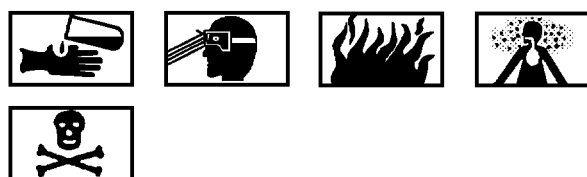
h. Use a clean, dry cheesecloth to apply a thin coat of PR146 Blue cleaning compound to bonding surface of edging strip.



Adhesive Primer

19

i. Use a clean, dry cheesecloth to apply a thin coat of primer PR 142 to area on acrylic transparency where edging strip will be installed.



Sealing Compound

20

j. Prepare PR-1725, B-2 sealing compound.

k. Apply a thin coat of sealing compound to surfaces being bonded.

l. Install scrim cloth between bonding surfaces to control bond line thickness.

m. Position edging strip on acrylic transparency.



Use care not to tighten clamps excessively.
Damage to transparency may result.

n. Install clamps applying sufficient pressure to force out air and excessive sealing compound.

o. Remove excessive sealing compound with cheesecloth dampened with isopropyl alcohol.

p. Cure sealing compound for 25 hours before removing clamps.

q. If gap at end of edging strip exceeds 0.06 inch:

(1) Prepare PR-1725 B-2 sealing compound.

(2) Fill in gaps to edging strip mold line with sealing compound.

(3) Cure sealing compound for 25 hours.



Use extreme care when back drilling not to damage holes in acrylic transparency.

r. Back drill 0.195 +0.007 -0.000 inch diameter holes in edging strip, 43 places, using existing holes in 74A350604 arch as guide.

s. Countersink holes in edging strip to flushness requirement of fastener.

t. Wet install fasteners using PR-1725 B-2 (A1-F18AC-SRM-200, WP011 00), 43 places, detail C.

u. Torque fasteners to 30-35 inch-pounds.

v. Apply finish system as required (A1-F18AC-SRM-500, WP021 00).

24. **REPLACEMENT.** For acrylic transparency replacement, (WP004 03).

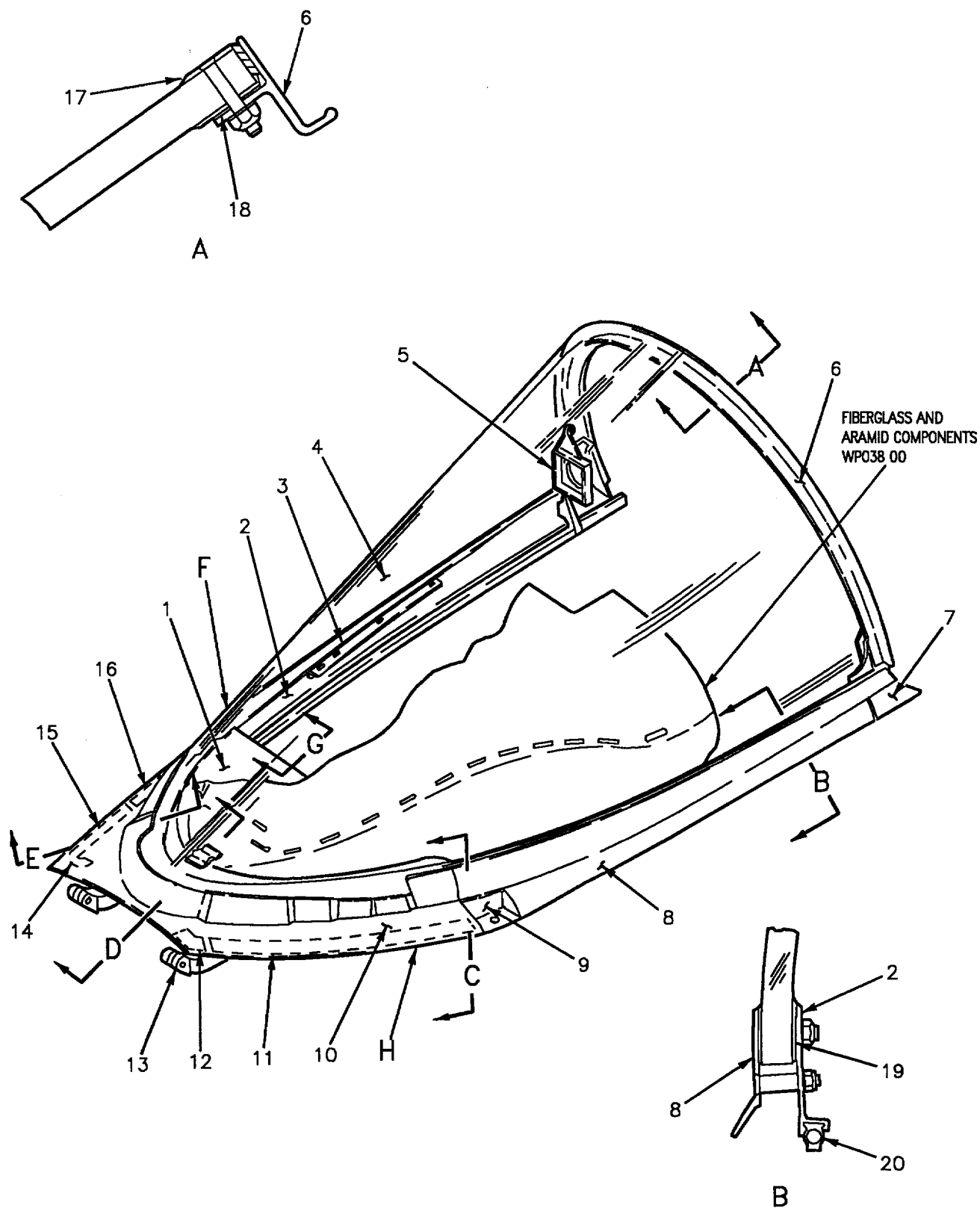


Figure 1. Material Index (Sheet 1)

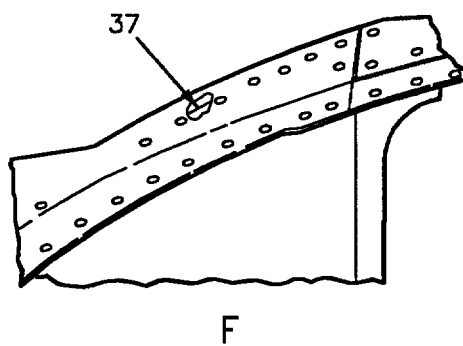
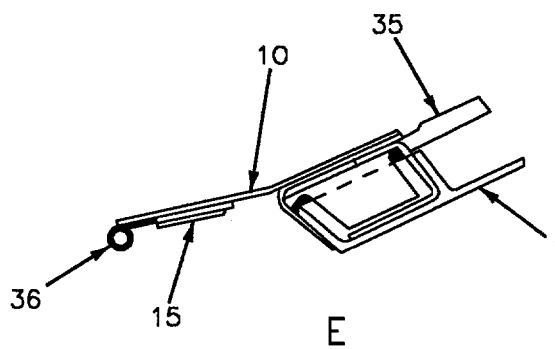
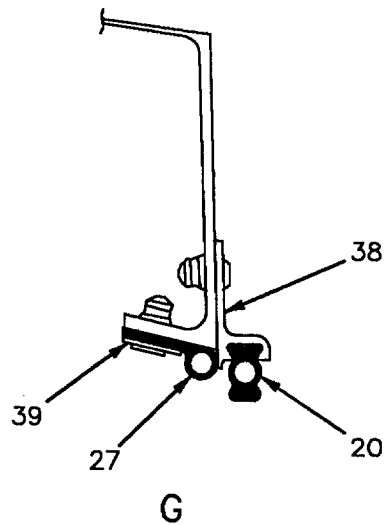
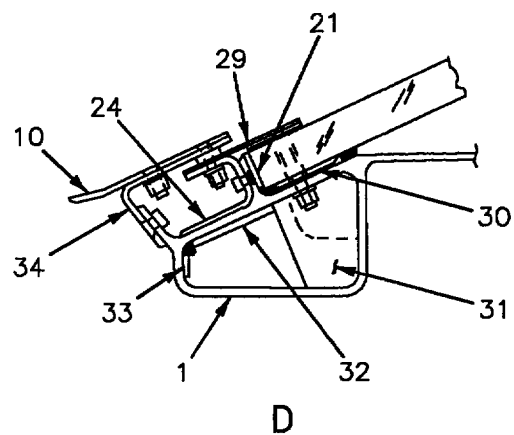
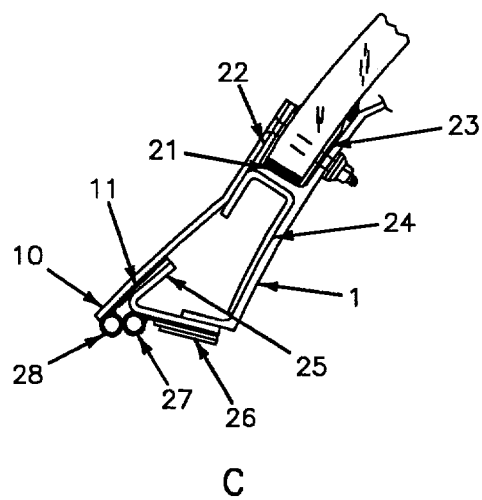


Figure 1. Material Index (Sheet 2)

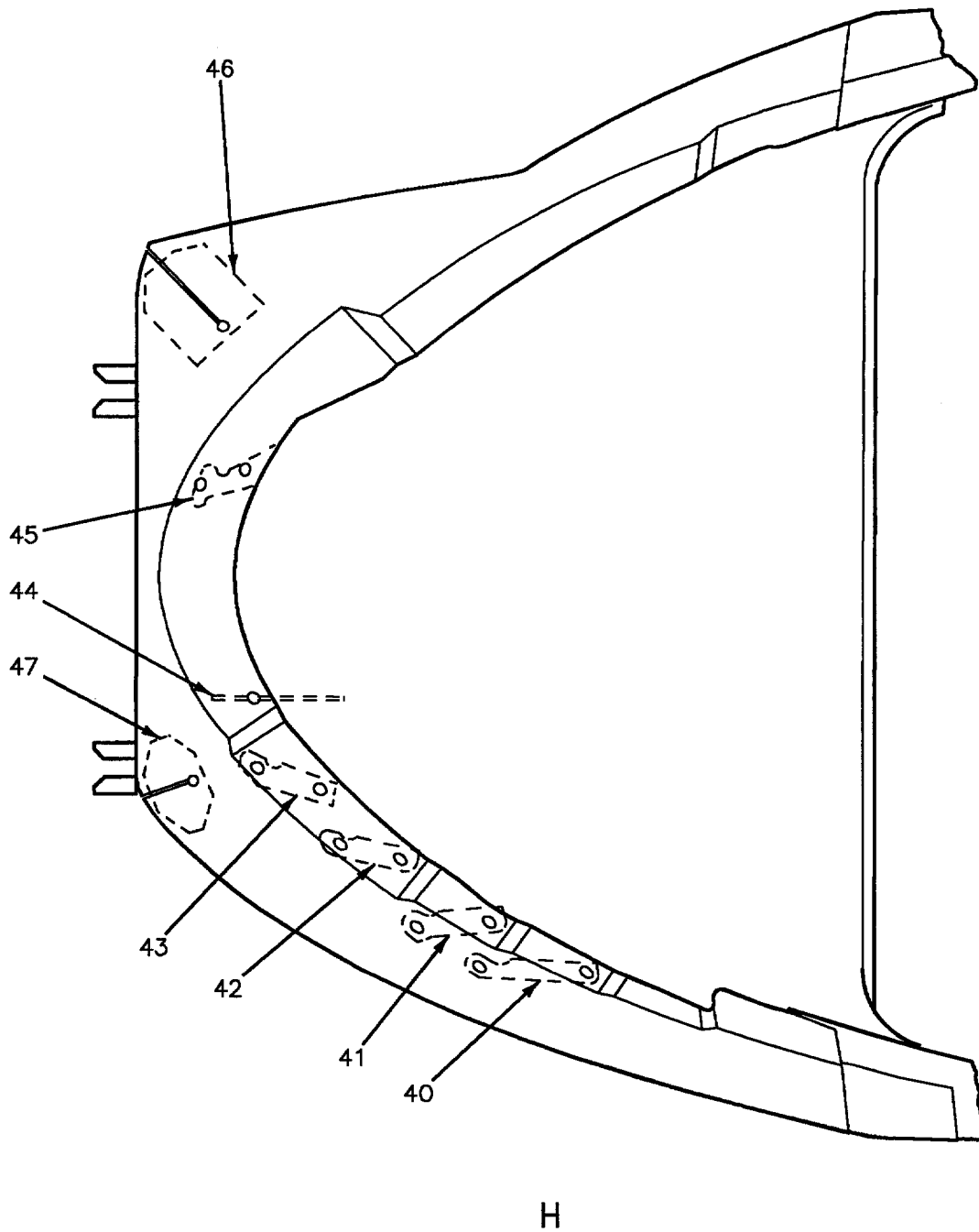


Figure 1. Material Index (Sheet 3)











IDX NO.	EFT	NOMENCLATURE AND PART NO.	DESCRIPTION	MATERIAL
1		Deck 74A350602-2017	Casting	A356-T61 Al Aly
2		Frame 74A360609-2002, -2001	1MA10308D01 Extr	7075-T73 Al Aly
3		Support 74A360624-2009, -2011	0.063 Sheet	7075-T6 Alclad
4	 	Windshield Panel 74A350600-1001 74A350600-1003	0.600 Sheet	Stretched Acrylic
5	 	Support 74A350727-2003 74A350727-2007	Casting	A356-T61 Al Aly
6		Arch 74A350604-2001	1MA10360D01 Extr	7075-T73 Al Aly
7		Support 74A350608-2011, -2012	Forging	7075-T7352 Al Aly
8		Frame 74A350605-2005, -2006	Pressing	7075-T73 Al Aly
9		Support 74A350611-2003, -2004	Machining	7075-T73 Al Aly
10	  	Fairing 74A350625-2001 74A350625-2017 74A350625-2023	0.063 Sheet	7075-T6 Alclad
11		Retainer 74A350625-2005	0.032 Sheet	7075-T6 Alclad
12		Retainer 74A350625-2013	0.032 Sheet	7075-T6 Alclad
13		Hinge 74A350615-2001, -2002	1.50 Plate	7075-T7351 Al Aly
14		Retainer 74A350625-2011	0.032 Sheet	7075-T6 Alclad
15		Retainer 74A350625-2009	0.032 Sheet	7075-T6 Alclad
16		Retainer 74A350625-2007	0.032 Sheet	7075-T6 Alclad

Figure 1. Material Index (Sheet 4)













IDX NO.	EFT	NOMENCLATURE AND PART NO.	DESCRIPTION	MATERIAL
17		Edging Strip 74A350635-2001	0.040 Sheet	6061-T6 Al Aly
18		Strip 74A350002-2009	0.031 Sheet	Silicone Rubber
19		 Strip 74A350002-2003	0.031 Sheet	Silicone Rubber
20		Seal 74A350603-1001	Extrusion	Silicone Rubber
21		Strip 74A350002-2025	0.063 Extr	Silicone Rubber
22	  	Closure 74A350630-2001 74A350630-2005 74A350630-2009	Molding	Chopped Fiber
23		Strip 74A350002-2005	0.063 Sheet	Silicone Rubber
24	 	Support 74A350628-2001 74A350628-2003	Laminate	Fiberglass
25	 	Support 74A350626-2001 74A350626-2009	0.063 Sheet	7075-T6 Alclad
26		Retainer 74A350002-2013	0.032 Sheet	7075-T6 Alclad
27		Seal 74A350002-2017	11M964-1 Extr	Silicone Rubber
28		Seal 74A350625-2003	11M964-1 Extr	Silicone Rubber
29	 	Deflector 74A350627-2001 74A350627-2003	0.020 Sheet	17-7PH Cres
30		Strip 74A350002-2007	0.063 Sheet	Silicone Rubber
31		Insulation 74A350614-2001	Molding	Silicone Rubber

Figure 1. Material Index (Sheet 5)









IDX NO.	EFT	NOMENCLATURE AND PART NO.	DESCRIPTION	MATERIAL
32		Insulation Block 74A350629-2001	0.093 Thick	Silicone Rubber
33		Insulation Block 74A350629-2005	0.093 Thick	Silicone Rubber
34		Support 74A350626-2003 74A350626-2007	0.063 Sheet	7075-T6 Alclad
35		Closure 74A350630-2003 74A350630-2007	Molding	Chopped Fiber
36		Seal 74A350625-2015	11M964-1 Extr	Silicone Rubber
37		Support 74A350626-2005 74A350626-2011	0.050 Sheet	7075-T6 Alclad
38		Retainer 74A350606-2001	1M10368D05 Extr	7075-T73511 Al Aly
39		Retainer 74A350002-2011	0.032 Sheet	7075-T6 Alclad
40		Deflector 74A350632-2007	0.016 Sheet	7075-T6 Alclad
41		Deflector 74A350632-2005	0.016 Sheet	7075-T6 Alclad
42		Deflector 74A350632-2003	0.016 Sheet	7075-T6 Alclad
43		Deflector 74A350632-2001	0.016 Sheet	7075-T6 Alclad
44		 Insulation Block 74A350629-2003	0.093 Thick	Silicone Rubber
45		Deflector 74A350632-2009	0.016 Sheet	7075-T6 Alclad
46		Doubler 74A350747-2071	0.050 Sheet	7075-T6 Alclad
47		Doubler 74A350747-2069	0.050 Sheet	7075-T6 Alclad

Figure 1. Material Index (Sheet 6)

IDX NO.	EFT	NOMENCLATURE AND PART NO.	DESCRIPTION	MATERIAL
LEGEND				
1		161353 THRU 161519.		
2		Two Required.		
3		161716 AND UP.		
4		162400 AND UP.		
5		161353 THRU 161715.		
6		161520 THRU 161715.		
7		161353 THRU 162477.		
8		162826 AND UP.		
9		161520 AND UP.		
10		161353 THRU 162399.		
11		162849 AND UP.		

Figure 1. Material Index (Sheet 7)

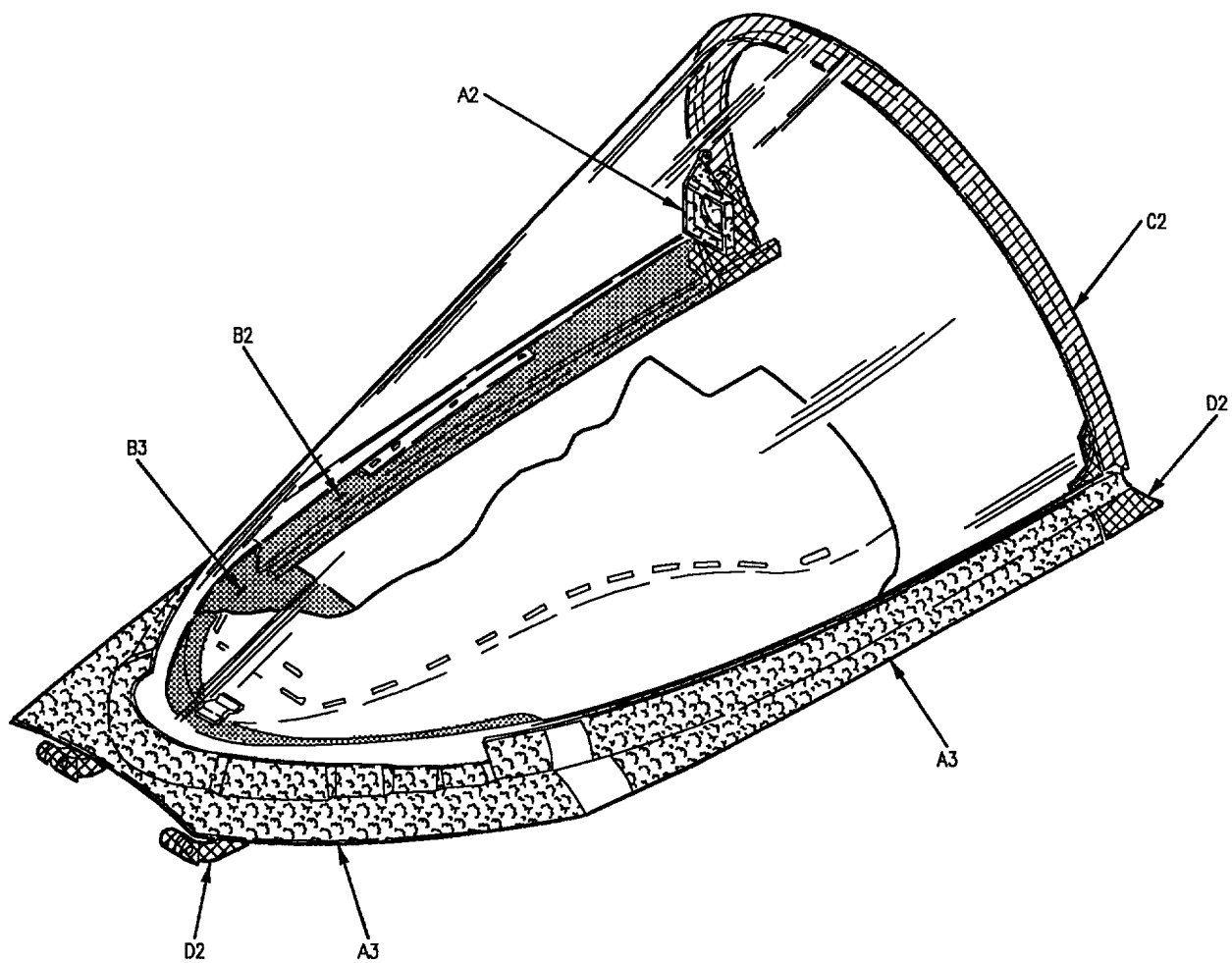


Figure 2. Repair Zone

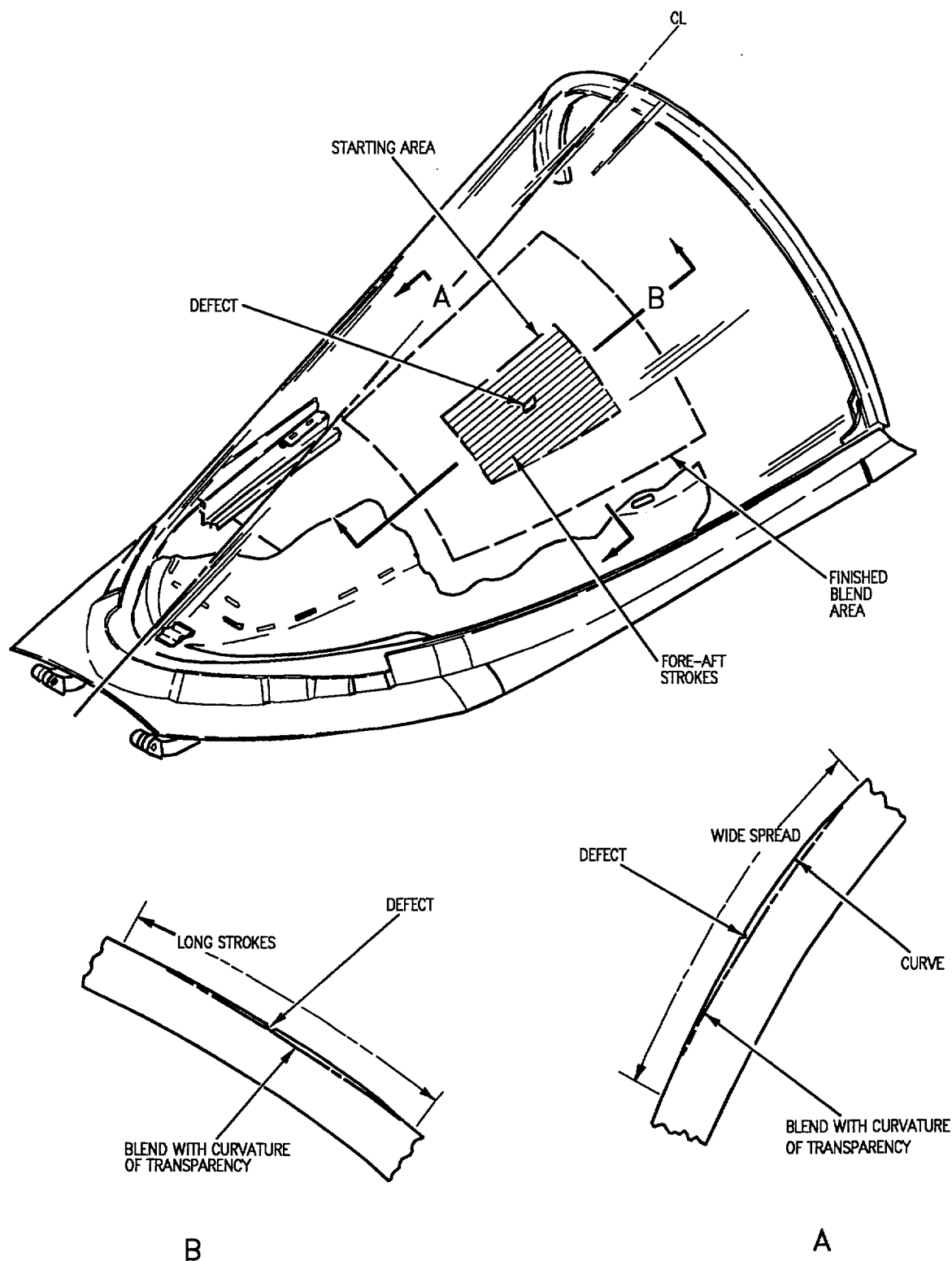


Figure 3. Acrylic Transparency Polishing (Sheet 1)

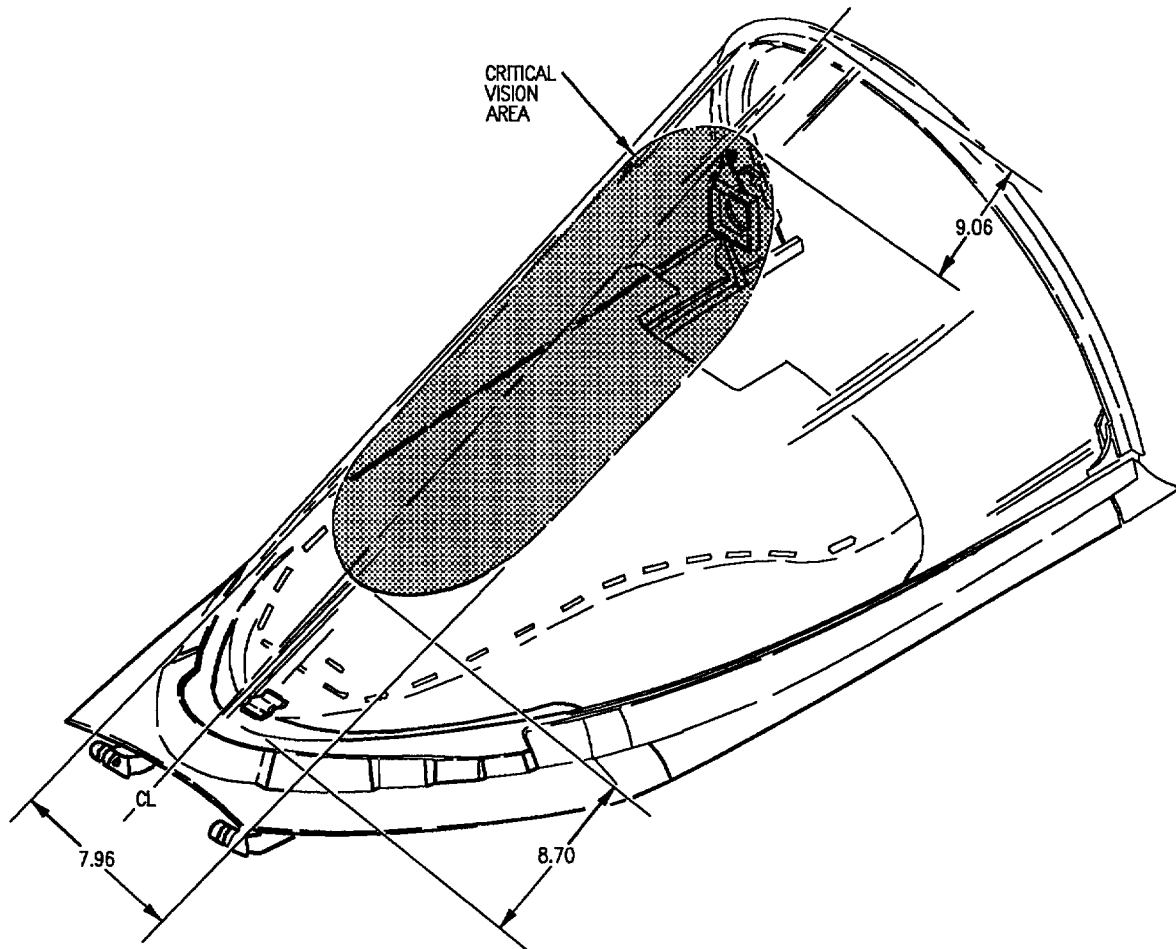


Figure 3. Acrylic Transparency Polishing (Sheet 2)

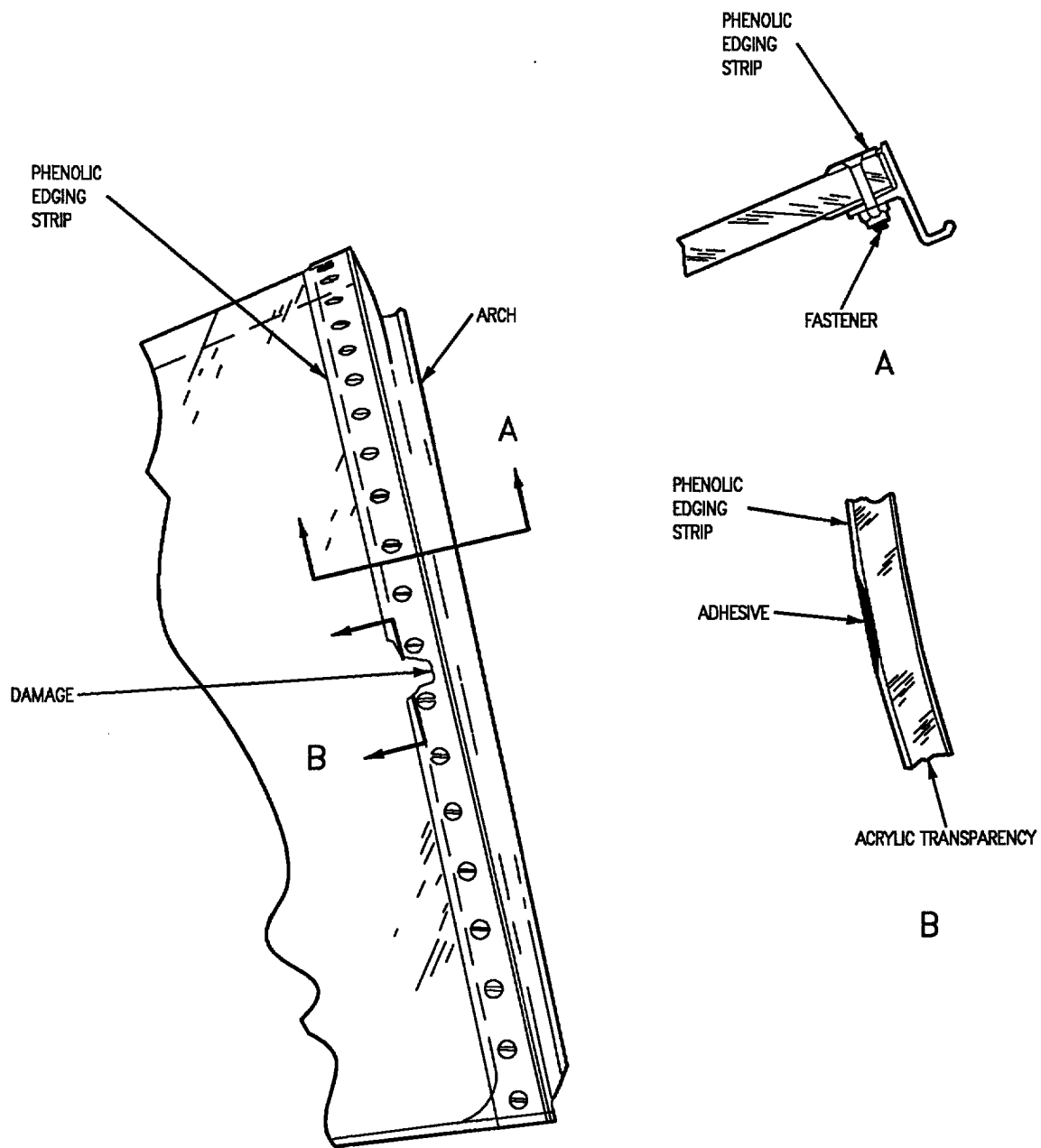


Figure 4. Installation of Repair Strap (Sheet 1)

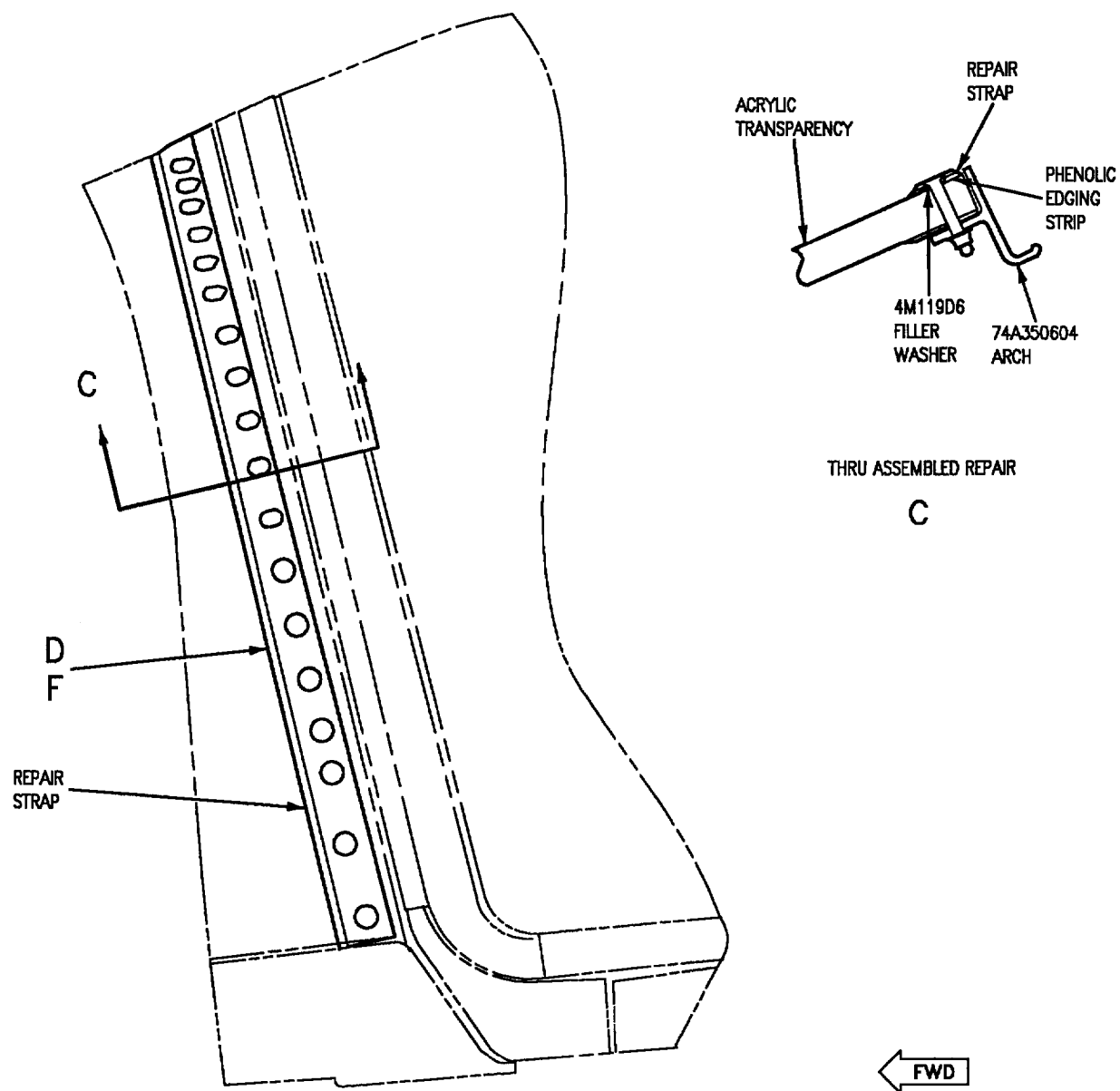


Figure 4. Installation of Repair Strap (Sheet 2)

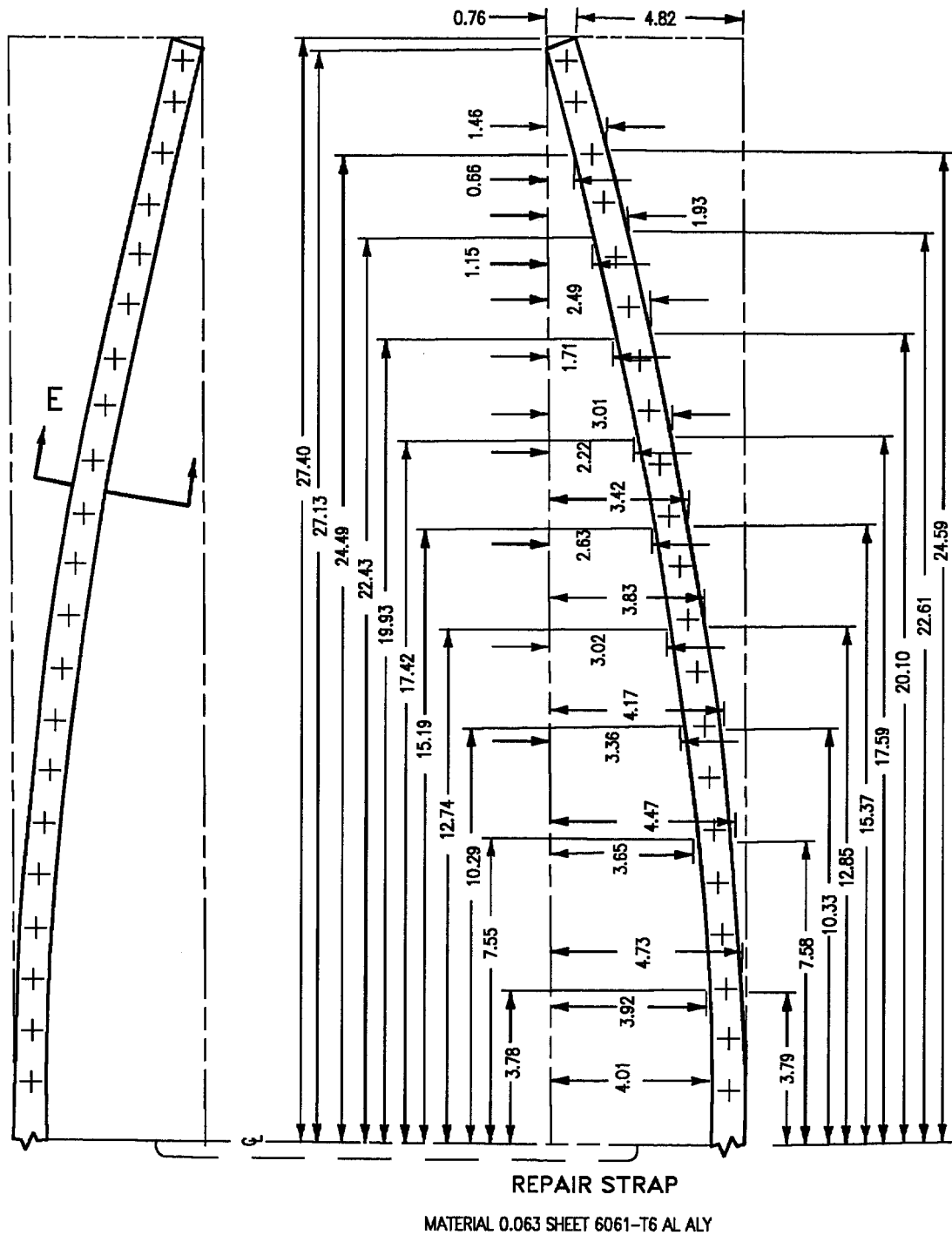
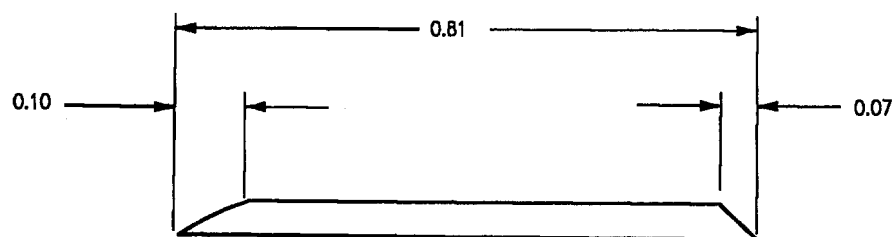


Figure 4. Installation of Repair Strap (Sheet 3)



E

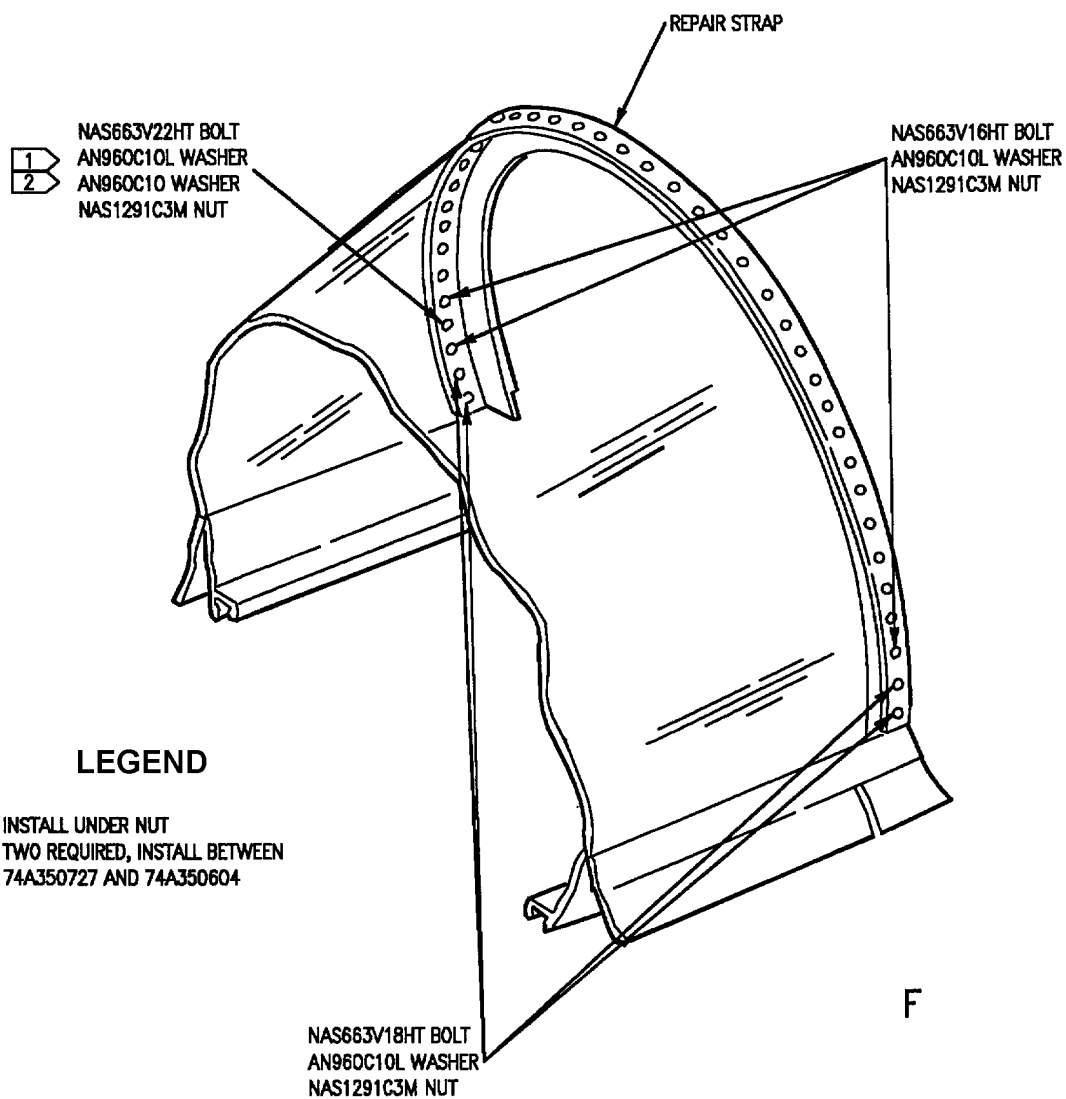


Figure 4. Installation of Repair Strap (Sheet 4)

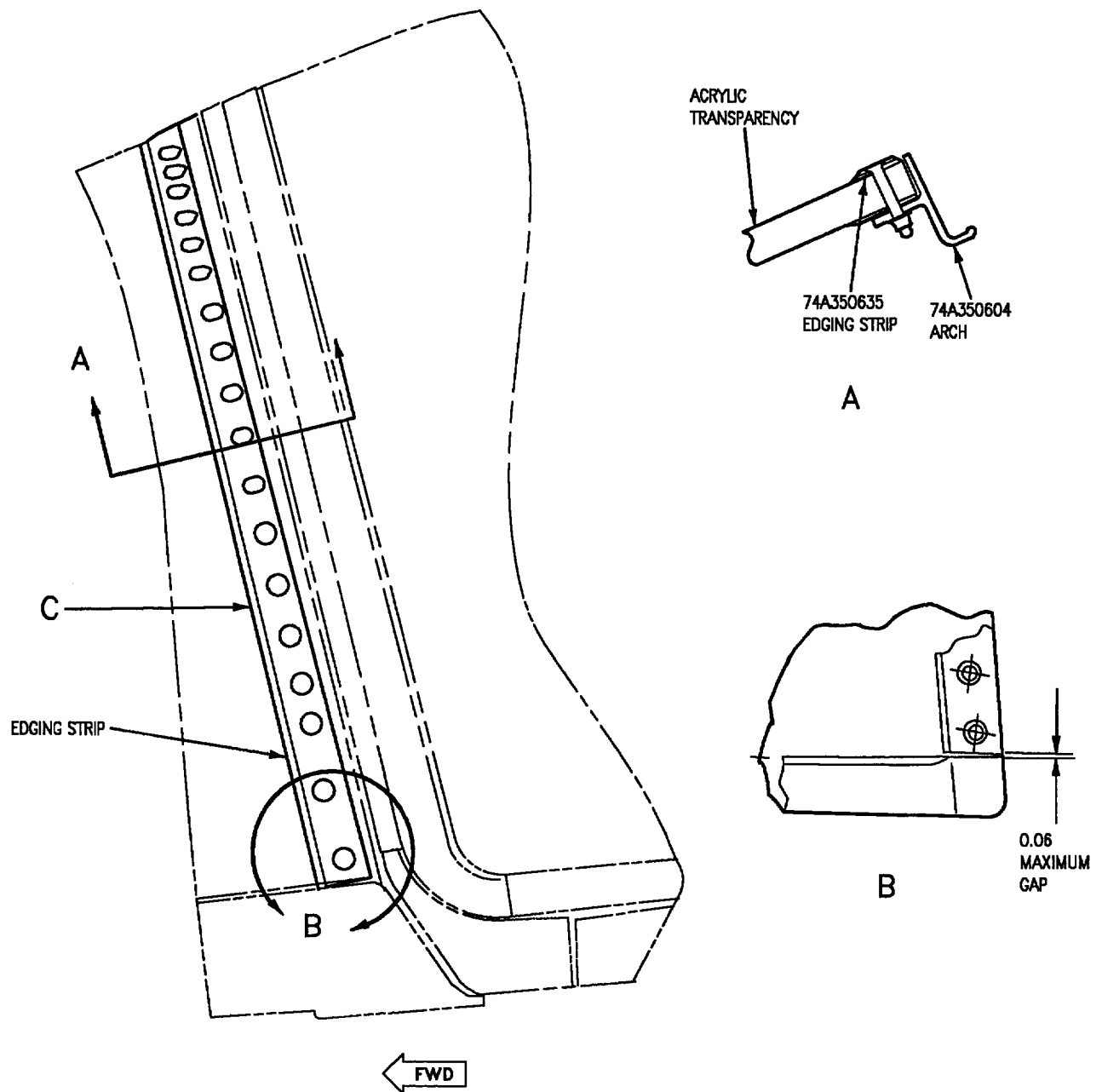


Figure 5. Installation of Edging Strip (Sheet 1)

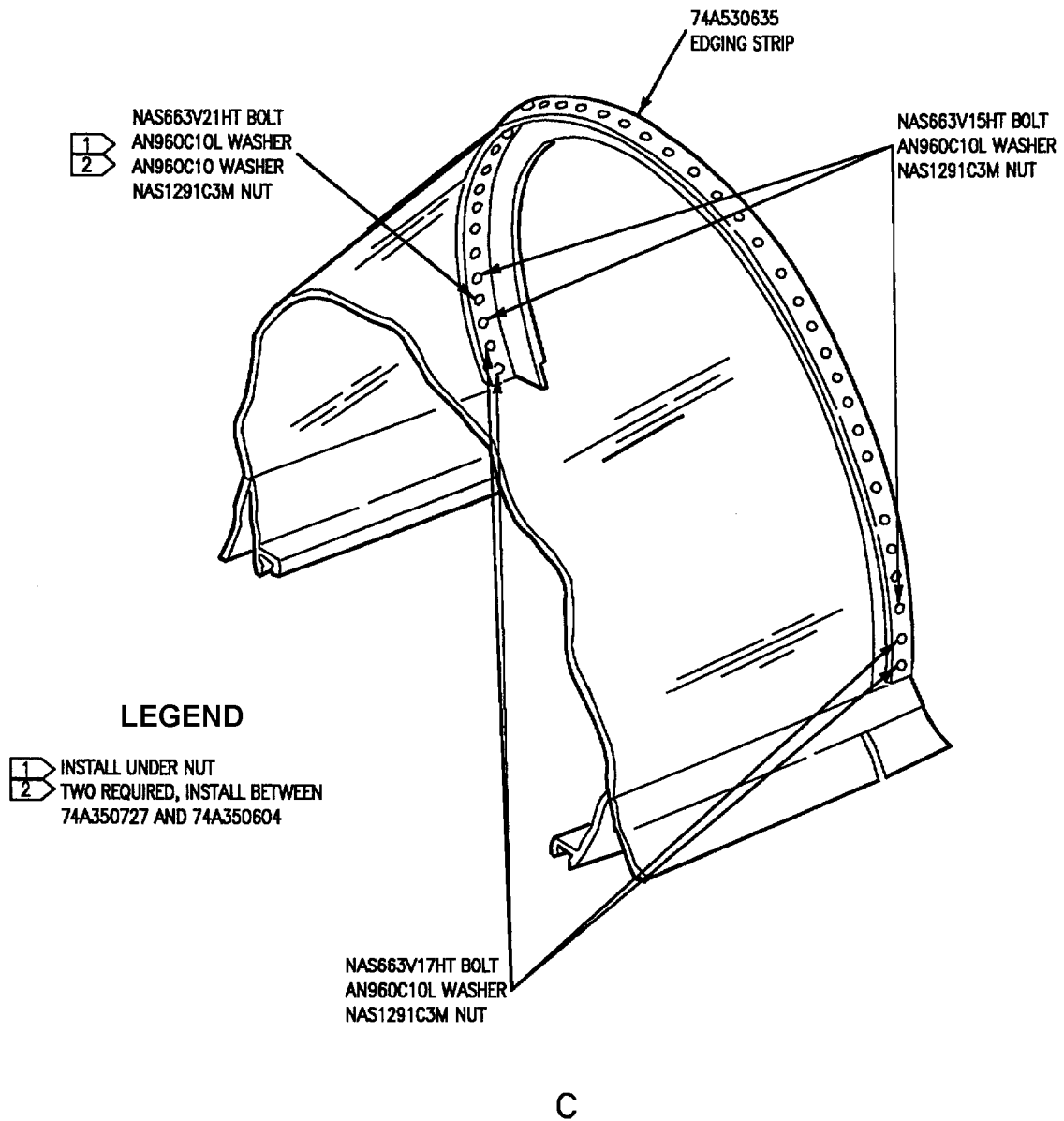


Figure 5. Installation of Edging Strip (Sheet 2)

DEPOT MAINTENANCE
STRUCTURE REPAIR
MAINTENANCE FIXTURE, RE174350002,
LOADING WINDSHIELD

Reference Material

Seat, Canopy, Survival Equipment and Boarding Ladder A1-F18AC-120-300
 Windshield Weather Seals WP117 01

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Installing Windshield - Hinges Damaged	19
Fixture Preparation	19
Installing Windshield	19
Windshield Preparation	19
Installing Windshield in Maintenance Fixture	9
Fixture Preparation	9
Installing Windshield	10
Windshield Preparation	9

Record of Applicable Technical Directives

None

1. DESCRIPTION.

2. The RE174350002-1 maintenance fixture (fixture) provides alignment of the windshield assembly. The fixture is used for transparency replacement and facilitates the drilling of holes in either a spared transparency or frame work components. The fixture requires accurate verification with an alignment kit (AK174350002) before use and should be gage recycled with the windshield alignment kit at intervals to be sure fixture remains accurate.

3. INSTALLATION OF MAINTENANCE STANDS. See figure 1.

4. This procedure outlines the arrangement of the maintenance fixture work stands (RE474000002-1) for loading of maintenance fixture.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Stands	RE474000002-1
Portable Hoist Unit	1262AS100-1

Materials Required

None

a. Hoist maintenance stands (RE474000002-1) with overhead hoist attached to hoist fitting (detail 128).

b. Position stands as below:

(1) Position stud bolt (detail 121) in center of slots.

(2) Distance between indentations in heads of stud bolts (detail 121) is 75-1/4 inches plus or minus 1 inch.

(3) Align centerline of spindles (detail 13) in line within 1.5 degrees of each other.

c. Anchor each stand to floor with six 3/8-inch bolts.

d. Disengage L-pin (detail 14) from spindle (detail 13). Rotate spindle until plate (detail 13C) is parallel to floor with head of stud bolt (detail 121) up.

e. Reengage L-pin (detail 14) into spindles (detail 13).

f. Support the adjustable support (detail 12) with an overhead hoist attached to hoist fitting (detail 128),

remove cotter pin (detail 110), nut (detail 111), and washer (detail 112) from T-pin (detail 108) view B.

g. Remove T-pin (detail 108) from lower support (detail 11) and adjustable support (detail 12) view B.

h. Raise adjustable support (detail 12) until the upper surface of the plate (detail 13C) is 40.0 inches above floor. Re-install T-pin (detail 108) into lower support (detail 11) and adjustable support (detail 12) view B.

i. Install washer (detail 112), nut (detail 111), and cotter pin (detail 110) on T-pin (detail 108) and tighten nut (detail 111) view B.

j. Loosen jamnut (detail 115) and nut (detail 116) on eye bolt (detail 119), rotate eye bolt clear of plate (detail 13C) views A and C.

k. Swing upper plate (detail 101) clear of plate (detail 13C) view C.

l. Loosen jamnut (detail 115) and adjust nut (detail 114) to obtain a 0.40 inch preload dimension on disc springs (detail 117), two places, each stand, view C.

m. Tighten jamnut (detail 115) after preload dimension (0.40 inch) is reached, two places, each stand view C.

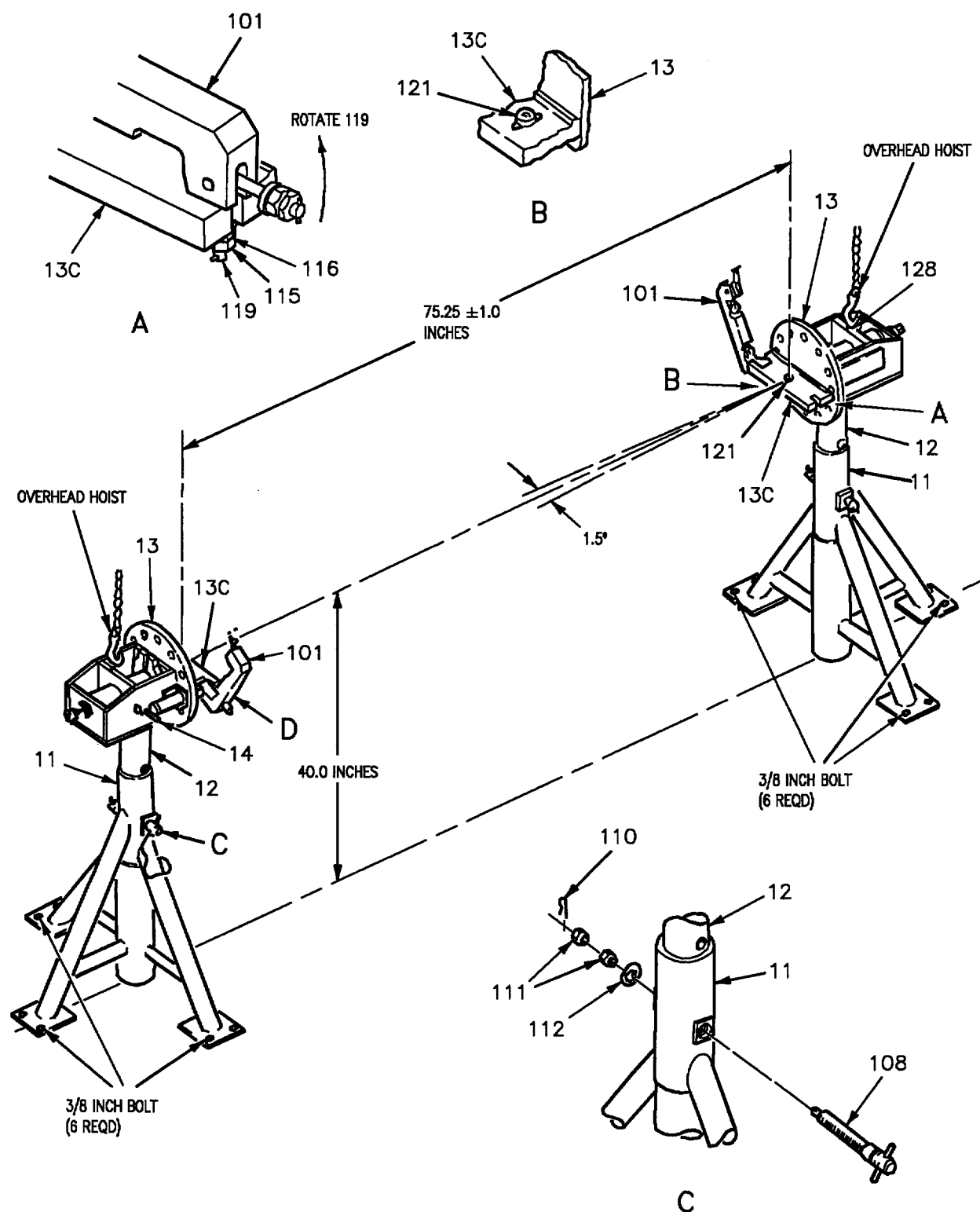


Figure 1. Installation of Maintenance Stands (Sheet 1)

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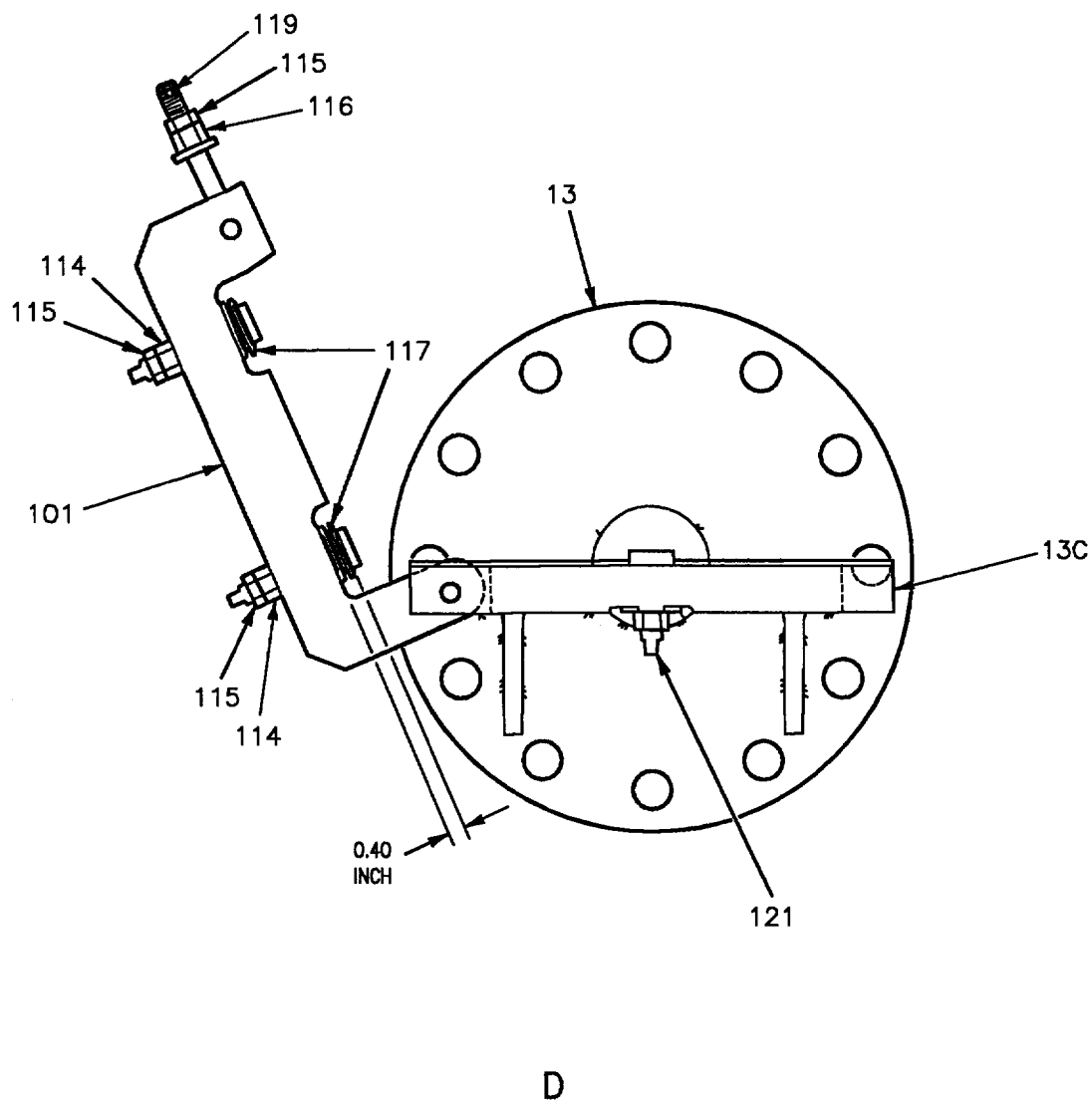


Figure 1. Installation of Maintenance Stands (Sheet 2)

DETAIL NO.	NAME	FUNCTION
11	Lower support	Supports maintenance fixture.
12	Adjustable support	Supports maintenance fixture.
13	Spindle	Supports and rotates maintenance fixture.
13C	Plate	Supports and positions maintenance fixture.
14	L-Pin	Locates detail 13.
101	Upper plate	Secures maintenance fixture in place.
108	T-Pin	Locates details 11 and 12.
110	Cotter Pin	Secures detail 108 in place.
111	Nut	Secures detail 108 in place.
112	Washer	Secures detail 108 in place.
114	Nut	Adjusts preload dimension for detail 117.
115	Jamnut	Secures details 114 and 116 in place.
116	Nut	Secures detail 119 in place.
117	Disc spring	Used for preload dimension.
119	Eyebolt	Secures detail 101.
121	Stud bolt	Align maintenance fixture.
128	Hoist fitting	Support maintenance stands while hoisting.

Figure 1. Installation of Maintenance Stands (Sheet 3)

5. INSTALLING MAINTENANCE FIXTURE TO STANDS. See figure 2.

WARNING

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, Windshield	RE174350002- 1
Maintenance Stands	RE474000002-1

Materials Required

None

a. Make sure L-pin (detail 14) is pinned and secure.

b. Make sure nut retaining stud bolt (detail 121) is loose to permit adjustment, figure 1.

c. Open upper plate (detail 101) to receive the maintenance fixture, figure 1.

Personal injury or damage to maintenance fixture could occur with improper use of fork lift. "LIFT HERE" markings are painted on the fixture, make sure forks on fork lift are positioned and secured to maintain even balance before lifting fixture into position. Only lift fixture high enough to install fixture into work stands.

d. Position the maintenance fixture over the work stands with fork lift, figure 2.

e. Lower fixture carefully to insure proper contact with stud bolt (detail 121). Adjust stud bolt to fit counterbore in maintenance fixture.

f. Close upper plate (detail 101) over fixture and rotate eye bolt (detail 119).

g. Secure with nut (detail 116) and lock with jam-nut (detail 115) each stand.

h. Remove fork lift.

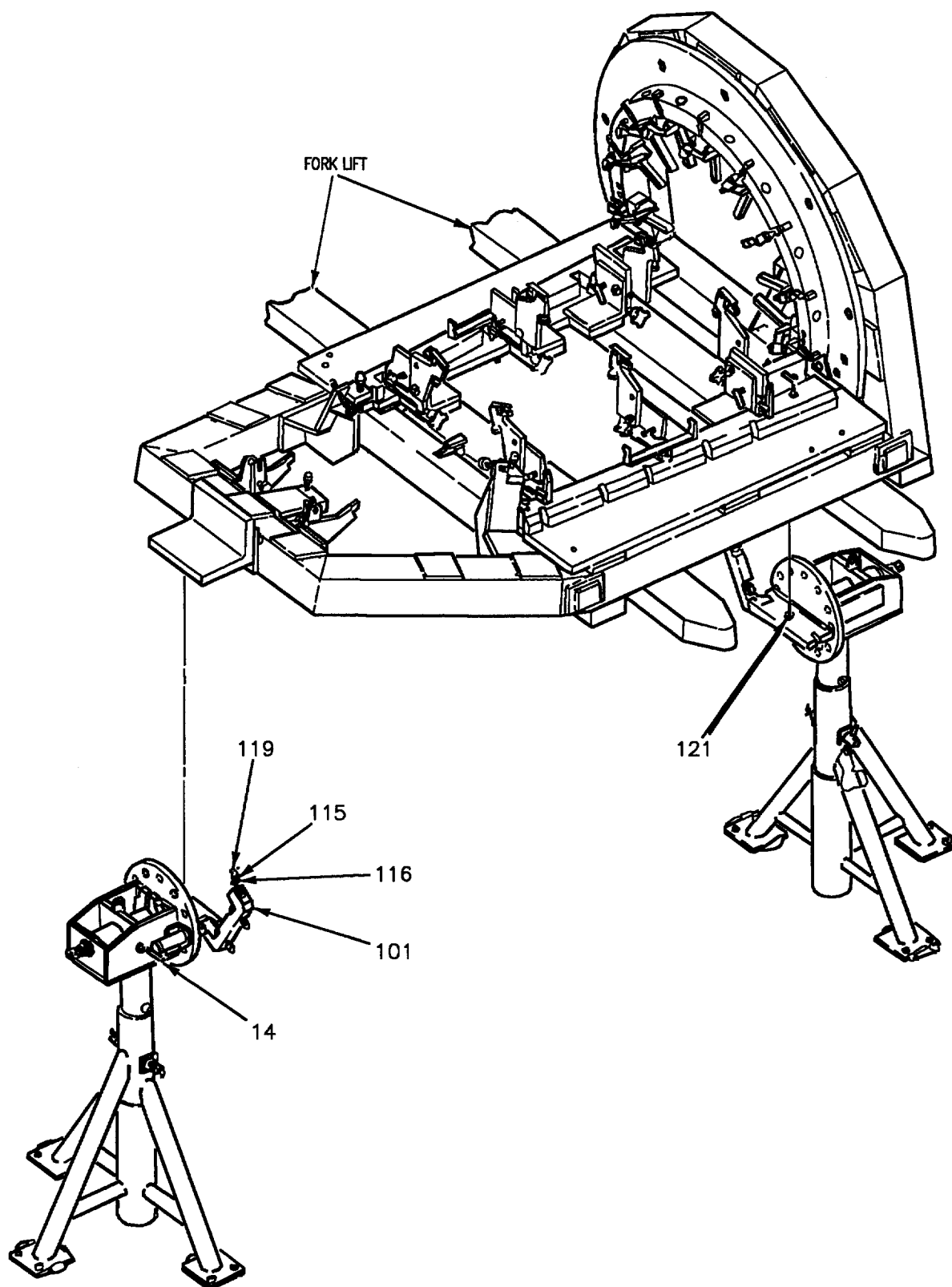


Figure 2. Installation (Sheet 1)

DETAIL NO.	NAME	FUNCTION
14	L-pin	Locates detail 13.
101	Upper plate	Secures maintenance fixture in place.
115	Jamnut	Secures details 114 and 116 in place.
116	Nut	Secures detail 119 in place.
119	Eyebolt	Secures detail 101 in place.
121	Stud bolt	Aligns maintenance fixture.

Figure 2. Installation (Sheet 2)

6. INSTALLING WINDSHIELD IN MAINTENANCE FIXTURE. See figure 3.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, Windshield	RE174350002-1
Maintenance Stands	RE474000002-1

Materials Required

Nomenclature	Specification or Part Number
Barrier Material	MIL-B-131, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1797 0.375 inch thick
Tape, Pressure Sensitive	A-A-883 Type 1, 1 inch

7. Fixture Preparation. See figure 3.

NOTE

If windshield is installed for alignment check only, remove shim (detail 196) two places before windshield installation, view G.

a. Remove and stow all loose and removable details.

b. Retract the arch F.S. locator pin (detail 115) nine places so that the F.S. locator (detail 106) is below the surface of plate (detail 101), view A and B.

c. Retract the arch clamp (detail 113) nine places on plate (detail 101), view B.



To prevent damage to the transparency make sure the side frame locators are secure in the retracted position.

d. Pull L-pin (detail 137) 6 places and rotate in-board and outboard side frame locators (details 149, 154, 152, 153, 148, 233, 146, 147, 229, 231, 230, and 232) out of the way to clear transparency, view E.

e. Retract hinge clamp (detail 48) two places, view C.

f. Retract WL locators (detail 243) two places before loading windshield into fixture.

g. Retract pressure deck seal retainer locator (detail 34) three places to the downward position.

h. Remove the seal retainer clamp (detail 36) and the handknob (detail 195) or position clamp (detail 36) pointing aft and secure with handknob (detail 195) three places.

i. Loosen knob assembly (detail 136) six places, several turns.

8. Windshield Preparation.

NOTE

Be sure barrier material MIL-B-131 is installed between transparency and ethyl foam cushioning material.

a. If transparency is acceptable and is not to be replaced, protect the entire surface inside and out with cushioning material attached with pressure sensitive tape.

b. Remove pressure seal 74A350002 from retainers, view C (A1-F18AC-120-300, WP117 01).

c. Remove weather seal 74A350603 from retainers, view C (A1-F18AC-120-300, WP117 01).

NOTE

Remove 74A350747 shims from forward support fitting before installing windshield into maintenance fixture, view D.

d. Remove sealant from two locating surfaces at forward and aft support fittings which allows windshield to position with fixture.

e. Remove sealant from any surfaces which are to be checked.

f. Remove sealant from the arch if windshield is being located by arch or if arch is being checked.

g. Remove four fasteners from 74A350617 cover at forward attach support and remove cover from each side.

9. Installing Windshield.

WARNING

Personal injury or damage to transparency could occur with improper lifting of windshield. The windshield weighs approximately 75 lbs. It requires two or more people to properly lift and install windshield on maintenance fixture.

a. Hand load windshield assembly on maintenance fixture for locating.

b. Lower windshield assembly slowly on the fixture, lowering the aft section on the fixture first. Push the windshield up against plate (detail 101), lower the forward section of windshield until it aligns with locator (details 252 and 253), push windshield forward until holes in windshield attaching hinges match with holes in locator (details 252 and 253).

c. Be sure aft support fittings are mated with shim (detail 172), views F and H.

d. Pin windshield aft support fittings with hand-knob assembly (detail 30) and thumb nut (detail 183) two places, views G and H.

e. Pin windshield attaching hinges to locators (details 252 and 253) with (detail 266) pin two places, view C.

NOTE

Windshield with damaged arch is installed without engaging arch clamps (detail 113).

f. Secure arch to locator (detail 106) by engaging arch clamp (detail 113) nine places.

WARNING

Before rotating fixture on the stands, handknob assembly (detail 30), must be installed in forward support fittings two places, and aft support fitting two places, and secured with thumb nut (detail 183), views G and H.

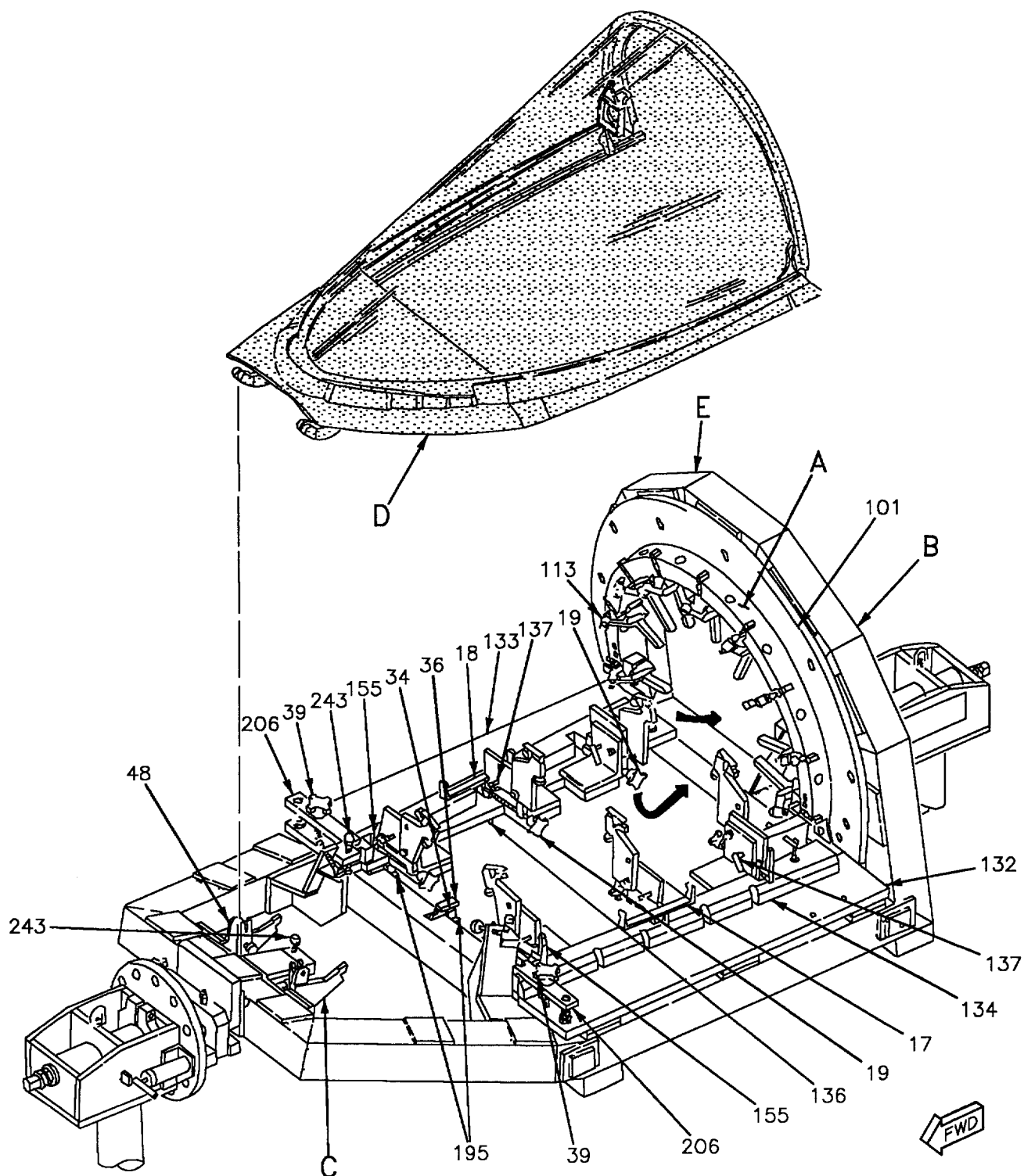


Figure 3. Installation (Sheet 1)

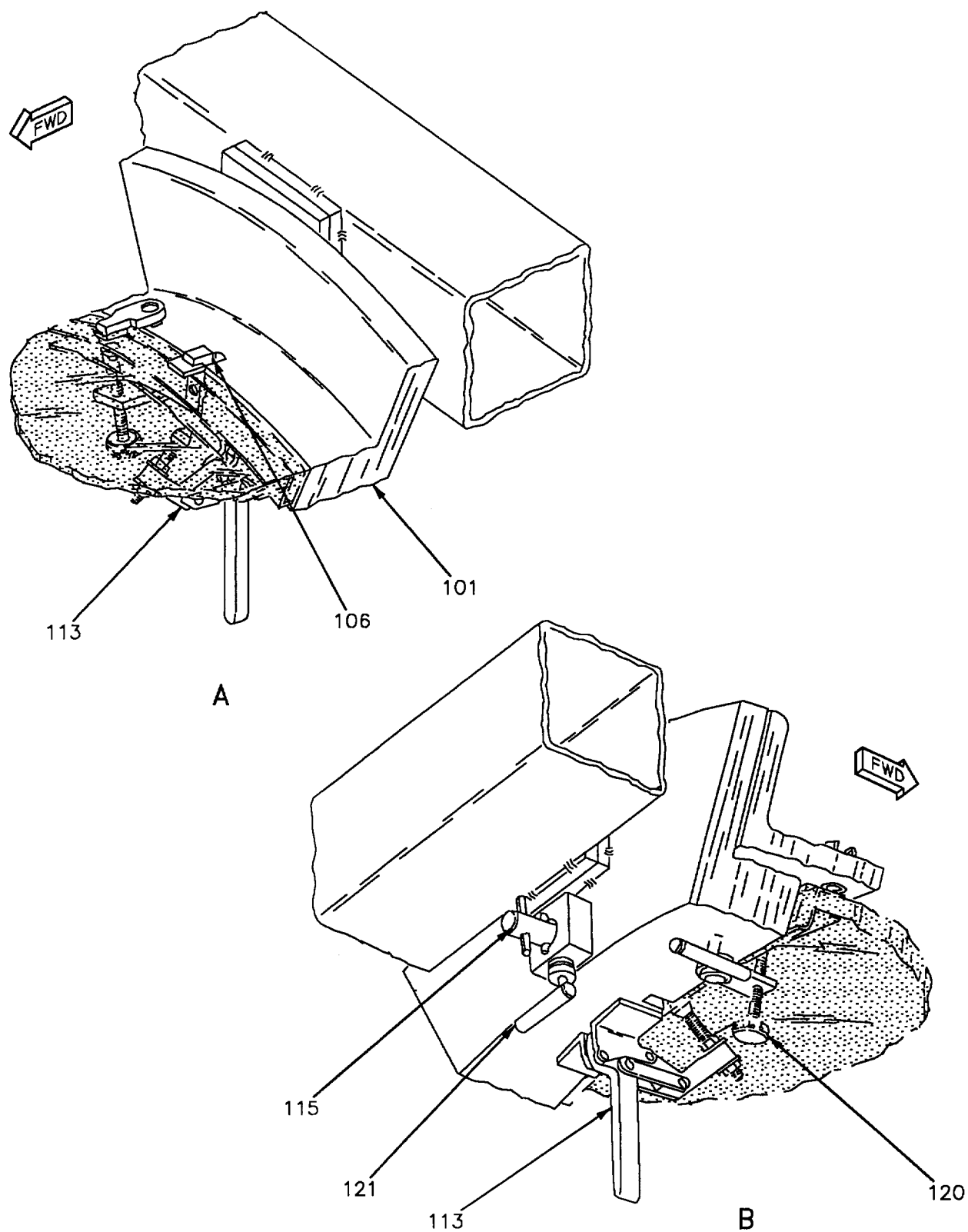


Figure 3. Installation (Sheet 2)

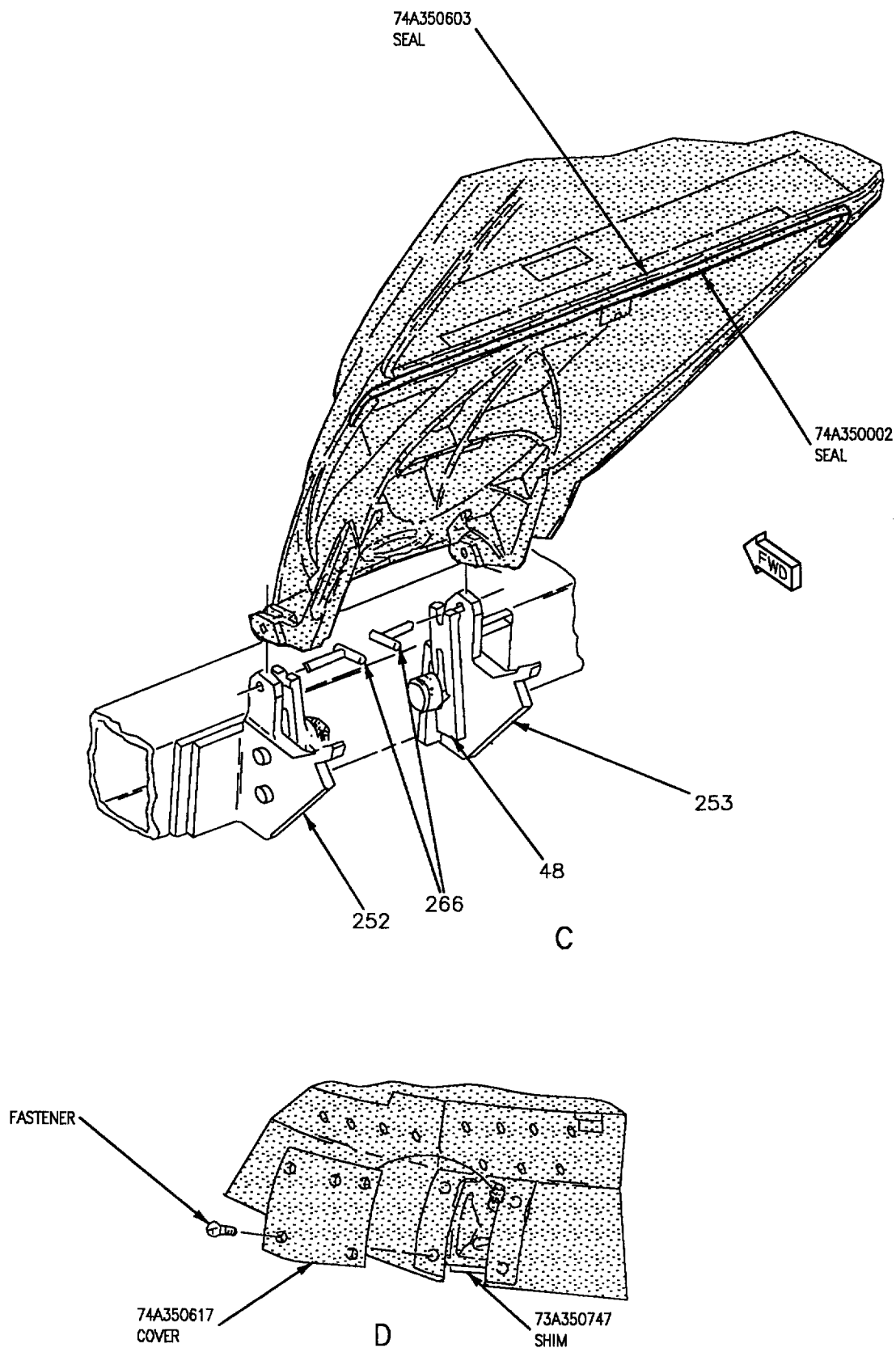


Figure 3. Installation (Sheet 3)

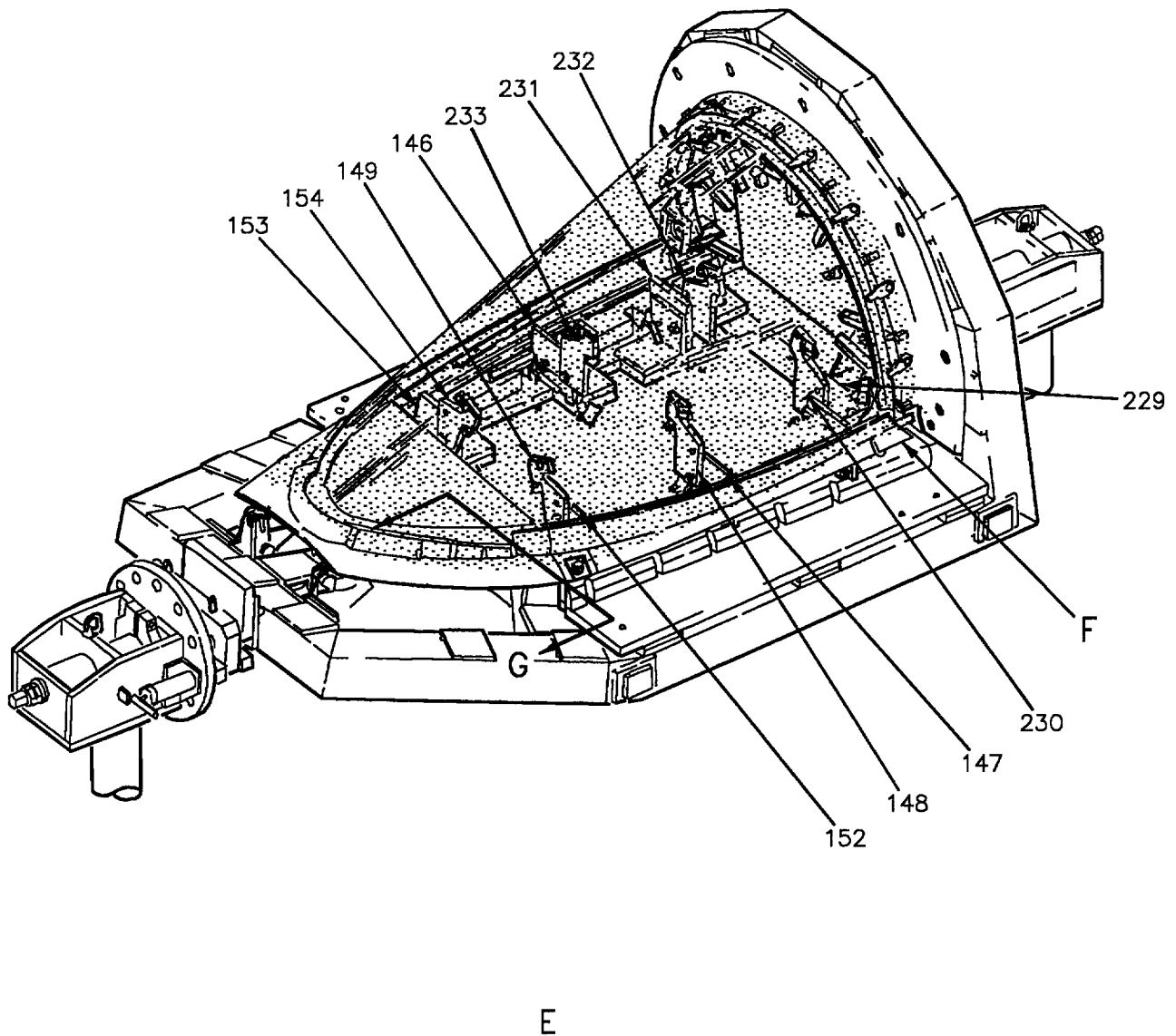


Figure 3. Installation (Sheet 4)

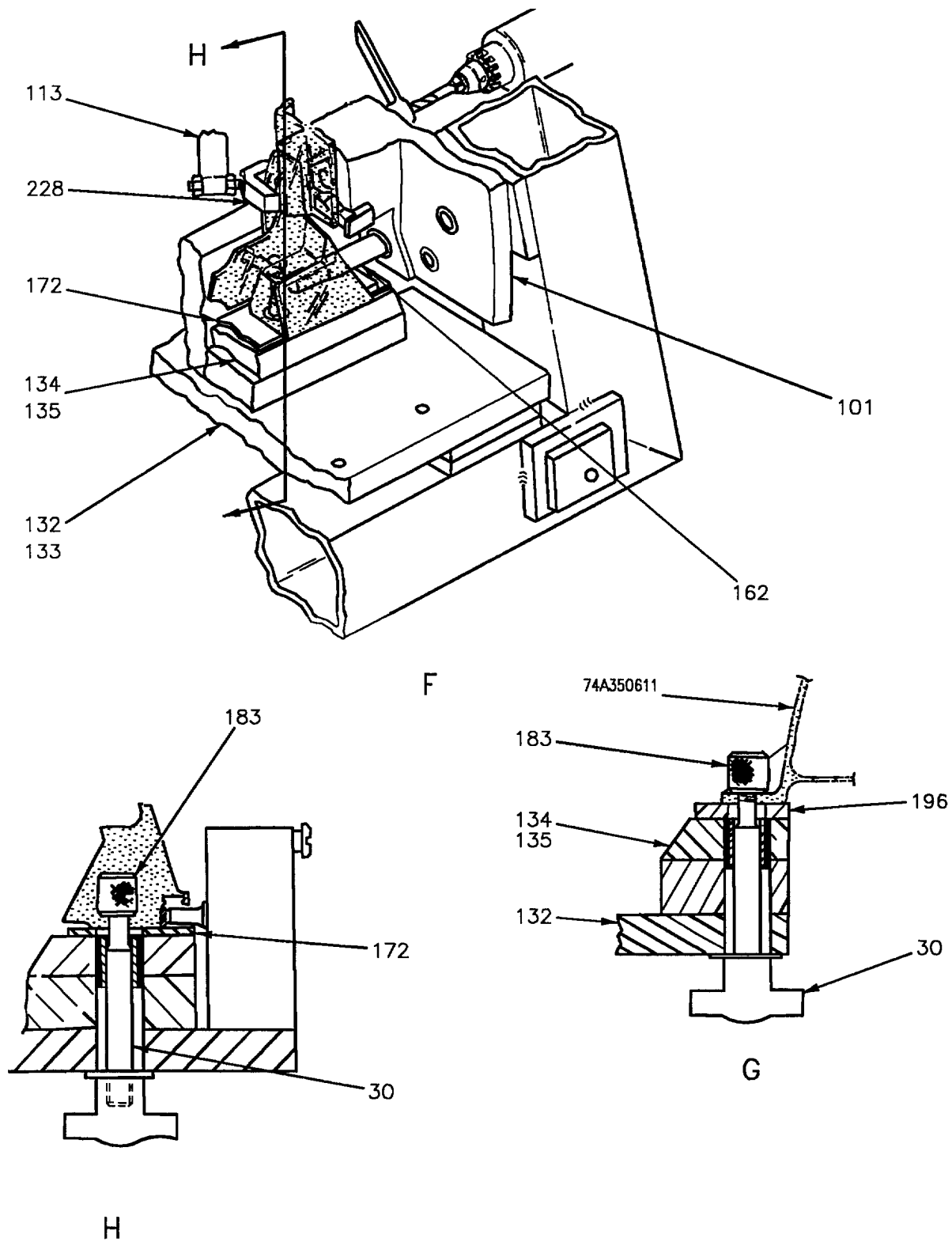


Figure 3. Installation (Sheet 5)

DETAIL NO.	NAME	FUNCTION
17	Clamp	Retains the inboard side frame to locator.
18	Clamp	Retains the inboard side frame to locator.
19	Handknob Assy	Applies force to clamp inboard side frame.
30	Handknob assembly	Locates and holds 74A350611 and 74A350608.
34	Locator	Provides water line location for pressure deck seal retainer.
36	Clamp	Retains pressure deck seal retainer to locator (detail 34).
39	Handknob assembly	Provides pressure to the clamp (detail 206).
48	Clamp	Clamp that retains hinge arms (buttock line location).
101	Plate	Base plate on the arch to which locator are fastened.
106	Locator	Attaches to pin (detail 115) to provide arch location.
113	Arch clamp	Retains arch to locator (detail 106).
115	Pin	Locates arch fuselage station and contour along with locator (detail 106).
120	Thumb screw	Secures transparency to arch (74A350604).
121	Pin	Secures pin (detail 115) on arch.
132	Plate	Base plate which attaches locators to fixture, left side.
133	Plate	Base plate which attaches locators to fixture, right side.
134	Block	Simulates aircraft fuselage station mold line, left side.
135	Block	Simulates aircraft fuselage station mold line, right side.
136	Knob assembly	Provides pressure to clamp (detail 17 and 18) for inboard side frame.
137	L-pin	Holds the inboard and outboard locator in position.
146	Locator	Locates inboard side frame (74A350609) buttock line and water line plane.
147	Locator	Locates inboard side frame (74A350609) buttock line and water line plane.
148	Locator	Locates and clamps 74A350605 outboard side frame, left side.

Figure 3. Installation (Sheet 6)

DETAIL NO.	NAME	FUNCTION
149	Locator	Locates and clamps 74A350605 outboard side frame, left side.
152	Locator	Locates inboard side frame (74A350609) buttock line and water line plane.
153	Locator	Locates inboard side frame (74A350609) buttock line and water line plane.
154	Locator	Locates and clamps 74A350605 outboard side frame, right side.
155	Clamp	Inboard side frame clamp (FWD position).
162	Pin	Checks location of latch hole.
172	Shim	Provides correct inboard gap when drilling 74A350608.
183	Thumb nut	Fasten to handknob assembly (detail 30) and secures FWD and AFT support fittings.
195	Handknob	Provides pressure to the clamp (detail 36).
196	Shim	Provides correct waterline gap when drilling 74A350611 support.
206	Clamp	Retains the 74A350611 support.
228	Clamp	Inboard side frame clamp (AFT position).
229	Locator	Locates inboard side frame 74A350609 buttock line and water line plane.
230	Locator	Locates and clamps 74A350605 outboard side frame, left side.
231	Locator	Locates inboard side frame (74A350609) buttock line and water line plane.
232	Locator	Locates and clamps (74A350609) outboard side frame, right side.
233	Locator	Locates and clamps 74A350605 outboard side frame, right side.
243	Locator	Water line locator for pressure deck.
252	Locator	Provides water line, fuselage station, buttock line location for hinge (74A350615), left side.
253	Locator	Provides water line, fuselage station, buttock line location for hinge (74A350615), right side.
266	Pin	Pins the hinge (74A350615) to locator (detail 252 and detail 253).

Figure 3. Installation (Sheet 7)

10. **INSTALLING WINDSHIELD - HINGES DAMAGED.** See figure 4.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, Windshield	RE174350002-1
Maintenance Stands	RE474000002-1

Materials Required

None

11. Fixture Preparation.

a. Same as paragraph 7, except as below.

b. Position and locate seal retainer locator (detail 34) by pinning with L-pin (detail 137), three places, views B and C.

c. Rotate clamp half (detail 36) to an aft position and secure with thumb nut (detail 195).

d. Remove the shims (details 172 and 196) at the forward and aft support fittings respectively.

12. Windshield Preparation. Same as paragraph 8.

13. Installing Windshield.

a. Same as paragraph 9, except as below.

b. Do not pin hinges to hinge locator (details 252 and 253). Fuselage station location will be provided by arch locator (detail 106). Water line location will be provided by seal retainer locator (detail 34) three places.

c. Position windshield to arch locator (detail 106) nine places and clamp securely using clamp (detail 113) and nose piece (detail 128) seven places.

d. Perform desired windshield checks. See applicable procedure for desired inspection.

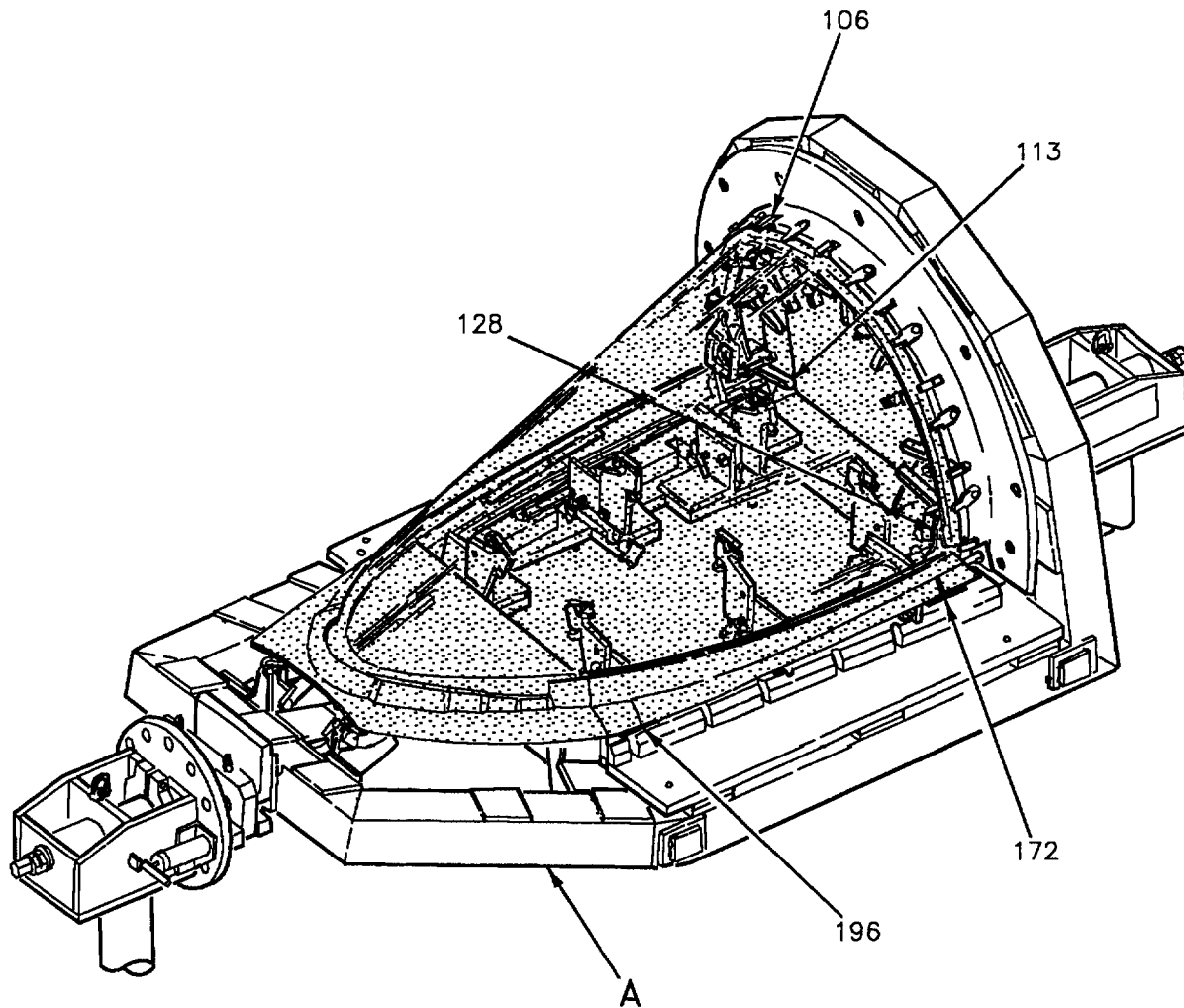


Figure 4. Installation (Sheet 1)

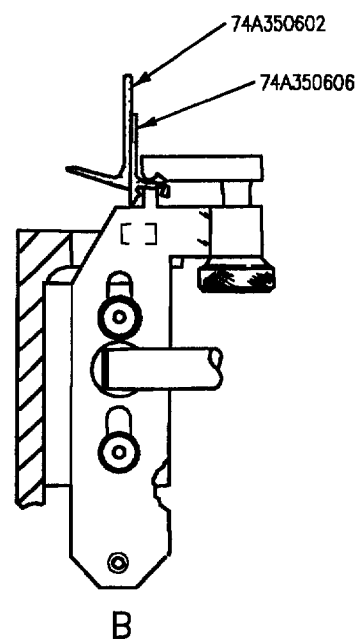
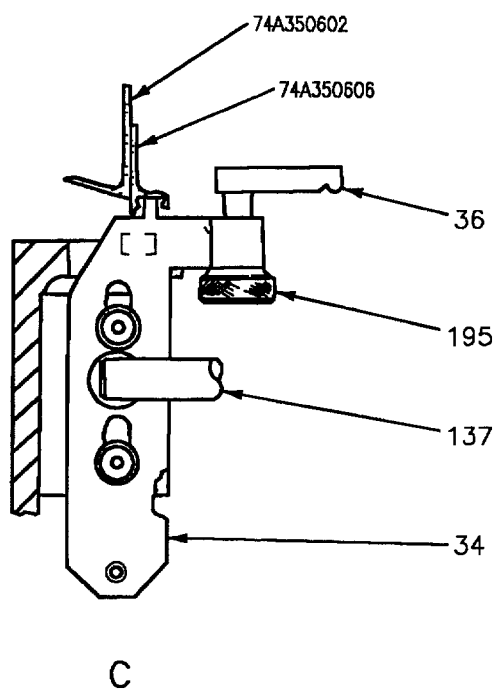
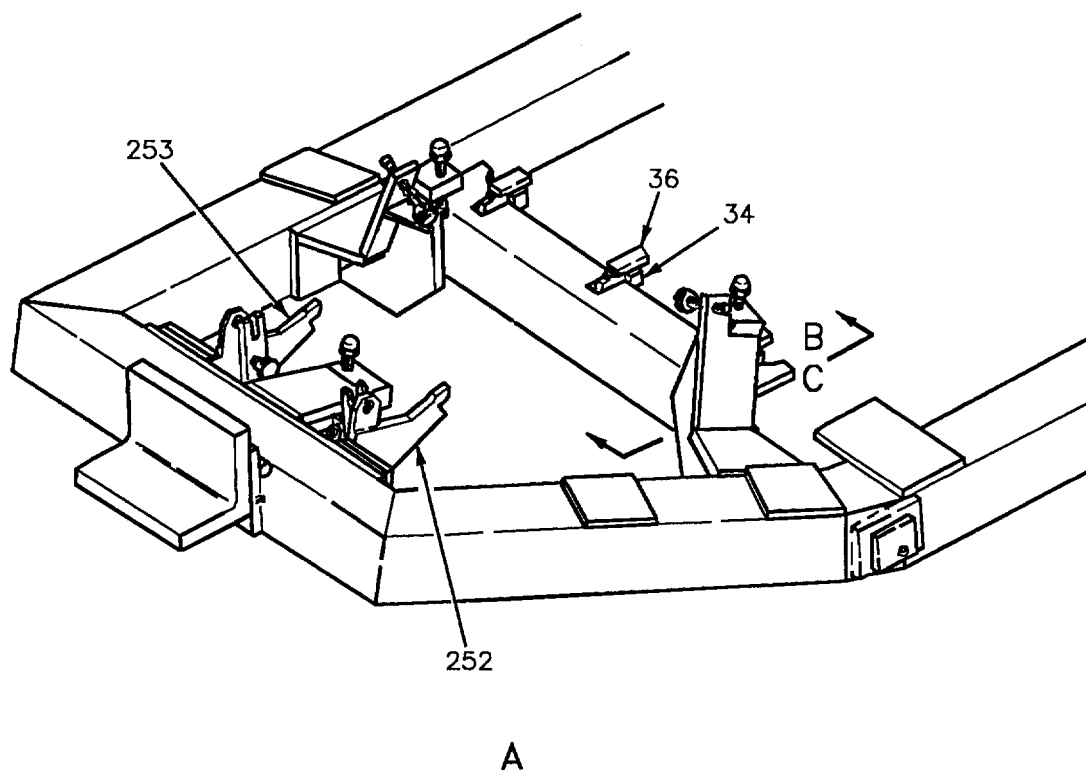


Figure 4. Installation (Sheet 2)

DETAIL NO.	NAME	FUNCTION
34	Locator	‘Z’ station locator and partial clamp.
36	Clamp half	Secures seal retainer to tool.
106	Arch locator	Moldline and y station locator for arch.
113	Clamp	Used to retain arch to arch locator (detail 106).
128	Nose piece	Part of clamp (detail 113).
137	L-pin	Position locator (detail 34) in position.
172	Shim	Fills gap between fixture and aft support fitting.
195	Thumb knob	Applies pressure to clamp half (detail 36).
196	Shim	Fills gap between fixture and forward support fitting.
252	Hinge locator	Provides location for left windshield hinge.
253	Hinge locator	Provides location for right windshield hinge.

Figure 4. Installation (Sheet 3)

DEPOT MAINTENANCE
STRUCTURE REPAIR
WINDSHIELD COMPONENT REPLACEMENT

Reference Material

Maintenance Fixture, RE174350002, Loading Windshield	WP004 01
Windshield Transparency Removal, Installation, and Replacement	WP004 03
Aircraft Corrosion Control	A1-F18AC-SRM-500
Windshield, Canopy, and Cockpit Finish System	WP021 00
Structure Repair, General Information	A1-F18AC-SRM-200
Gang Channel and Plate Nut Identification and Repair	WP004 05
Fasteners	WP004 06
Oversize Fasteners	WP004 07
Adhesive, Cement, and Sealant; Preparation and Application	WP011 00

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Record of Applicable Technical Directives

None

1. **ARCH, 74A350604, INSPECTION AND REPLACEMENT.** See figure 1.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, Windshield	RE174350002-1
Repair Kit, Canopy	RE274350006- 1
Repair Kit, Windshield	RE274350002-1

Materials Required

Nomenclature	Specification or Part Number
Adhesive	RTV-106
Adhesive Compound	EA960F
Cheesecloth	CCC-C-440, Type 1, Class 1
Cloth, Cleaning	Rymple Cloth -301-Purified
Isopropyl Alcohol	TT-I-735, Grade B
Methyl Ethyl Ketone	TT-M-261
Primer, Adhesive	PR142
Sealing Compound	PR-1725, B-2
Tape, Pressure Sensitive	A-A-833, Type 1, 1 inch

2. **INSPECTION.**

a. Make sure windshield is loaded correctly and secure (WP004 01).

b. Retract locator (detail 106) nine places by removing L-pins (detail 121) and retracting pins (detail 115), view B.

c. Using GO-NO GO gage (detail 205), inspect for twist by inserting GO end between arch and forward face of arch base (detail 101).

d. Inspect arch to make sure it is not warped and is at the correct fuselage station location.

e. If excess gap exists between arch and arch base (detail 101), try to insert NO-GO end of gage (detail 205). If gage can be inserted, arch is beyond maximum limits and must be replaced.

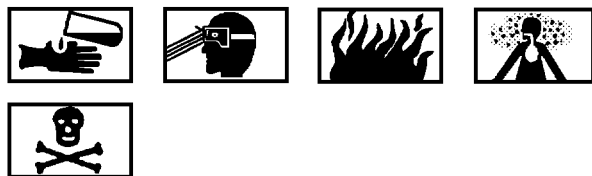
f. Engage pin (detail 115) nine places and secure with L-pin (detail 121), view B.

g. Inspect mold line location between locator (detail 106) and arch nine places, using 0.125 inch feeler, view A.

3. **REPLACEMENT.**

To prevent damage to transparency be sure barrier material remains between transparency and cushioning material.

a. Remove the transparency (WP004 03).



Methyl Ethyl Ketone

5

b. Clean all residual sealing compound and adhesive from structure with a plastic scraper and cheese-cloth moistened with methyl ethyl ketone.

c. Remove fasteners attaching arch to aft support fittings.

d. Remove arch.

e. Extend locator (detail 106) by engaging pin (detail 115) nine places, and secure with L-pin (detail 121), view B.

f. Install and locate new arch against forward face of locator (detail 106). Rotate arch to maintain fastener edge distance to aft support fittings.

g. Clamp arch against locators (detail 106) seven places, using clamps (detail 113), view B.

h. Insert 74A350747 shims between arch and aft support fitting and secure with clamps (detail 113) two places, views C and D.

i. If both arch and aft support fitting are being replaced do substeps below, see view D:

(1) Insert bushing liner (detail 131) into arch base (detail 101) at holes 222 and 223 left side, 224 and 225 right side.

(2) Insert traveler bushing (detail 16) into bushing liner (detail 131).

(3) Drill two holes through arch and aft support fitting per figure 2, detail A.

j. Mate drill two 0.195 inch diameter holes into new arch from aft support fitting, view C.



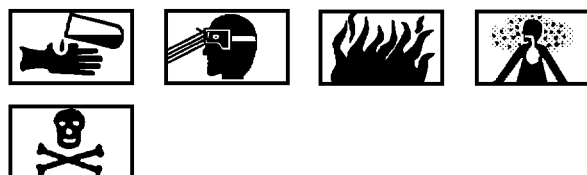
Adhesive

12

k. Bond 74A350002 silicone rubber strip to arch using RTV-106 adhesive.

l. Seal arch to aft support fitting:

(1) Clean area receiving sealing compound with cleaning cloth moistened with methyl ethyl ketone.



Adhesive Compound

21

(2) Prepare adhesive compound EA960F.

(3) Mix 50 parts B to 100 parts A until adhesive compound has turned pink in color.

(4) Apply adhesive to a maximum thickness of 0.03 inch to the area where arch and aft support fitting mate. See view F.

(5) Install fasteners per figure 2, detail A.

m. Temporarily install transparency (WP004 03) and secure to arch. See view E and substeps below:

(1) Install clamp half (detail 12) through holes of arch base (detail 101) eight places.

(2) Install clamp half (detail 13) over clamp half (detail 12).

(3) Rotate clamp half (detail 13) to lock position on clamp half (detail 12).

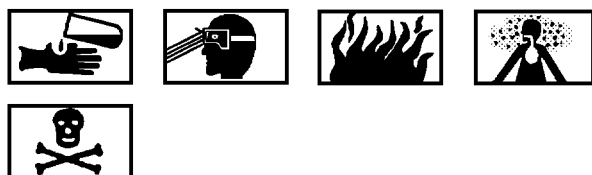
(4) Tighten screw clamp (detail 102) eight places to secure transparency to arch.

n. Mate drill 0.1285 inch pilot holes using traveler bushing (detail 54). See view E and figure 2.

o. Remove transparency (WP004 03).

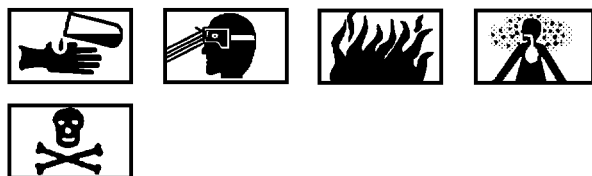
p. Drill pilot holes full size per figure 2.

q. Seal transparency to arch per view G and (WP004 03):



Isopropyl Alcohol

2



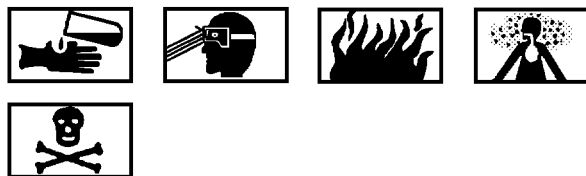
Adhesive Primer

19

(1) Clean surfaces on transparency and arch receiving sealing compound with cleaning cloth moistened with isopropyl alcohol.

(2) Brush apply one thin coat of adhesive primer to surfaces on transparency and arch receiving sealant.

(3) Allow adhesive primer to air dry for a minimum of 15 minutes before applying sealing compound.



Sealing Compound

20

(4) Prepare sealing compound by mixing base component and accelerator to a weighed ratio of 100 parts base component to 10 parts accelerator.

(5) Thoroughly mix components until a uniform color appears.

(6) Apply sealing compound per substeps below:

(a) Fay surface seal area indicated on view G (A1-F18AC-SRM-200, WP011 00).

(b) Fillet seal area indicated on view G (A1-F18AC-SRM-200, WP011 00).

(c) Wet install fasteners. See figure 2 and (A1-F18AC-SRM-200, WP011 00).

r. Apply finish system to arch (A1-F18AC-SRM-500, WP021 00).

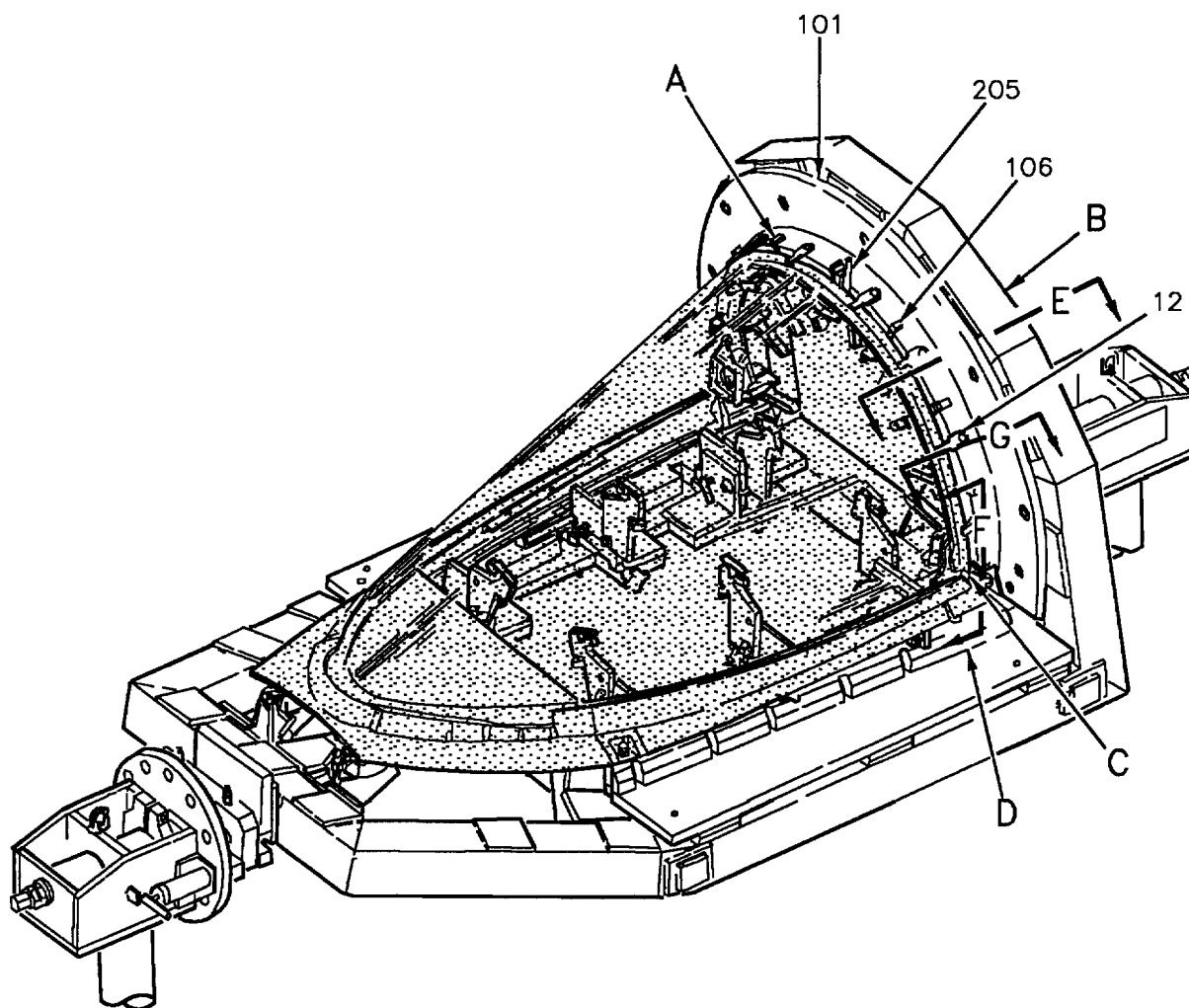


Figure 1. Inspection or Replacement - Arch (Sheet 1)

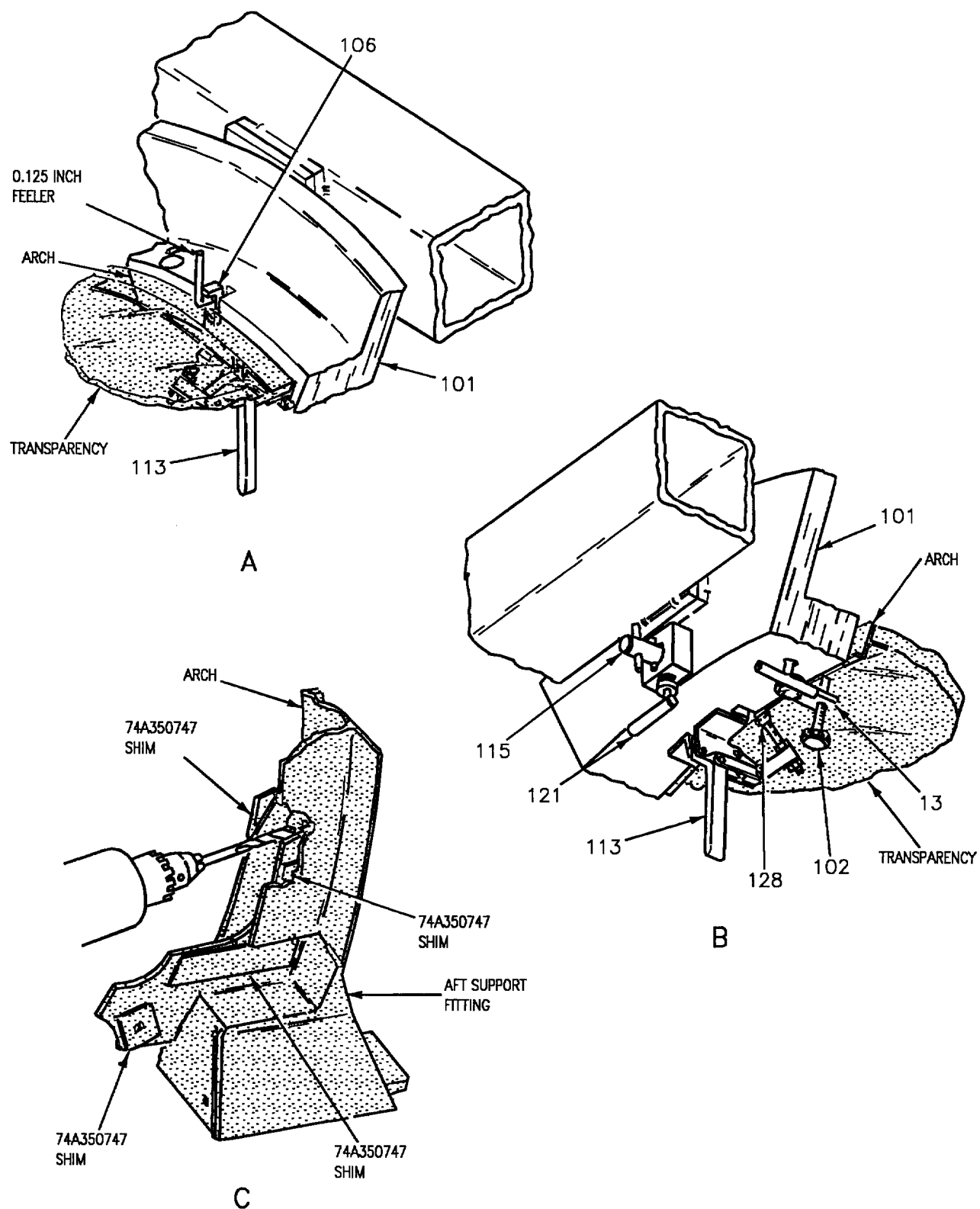


Figure 1. Inspection or Replacement - Arch (Sheet 2)

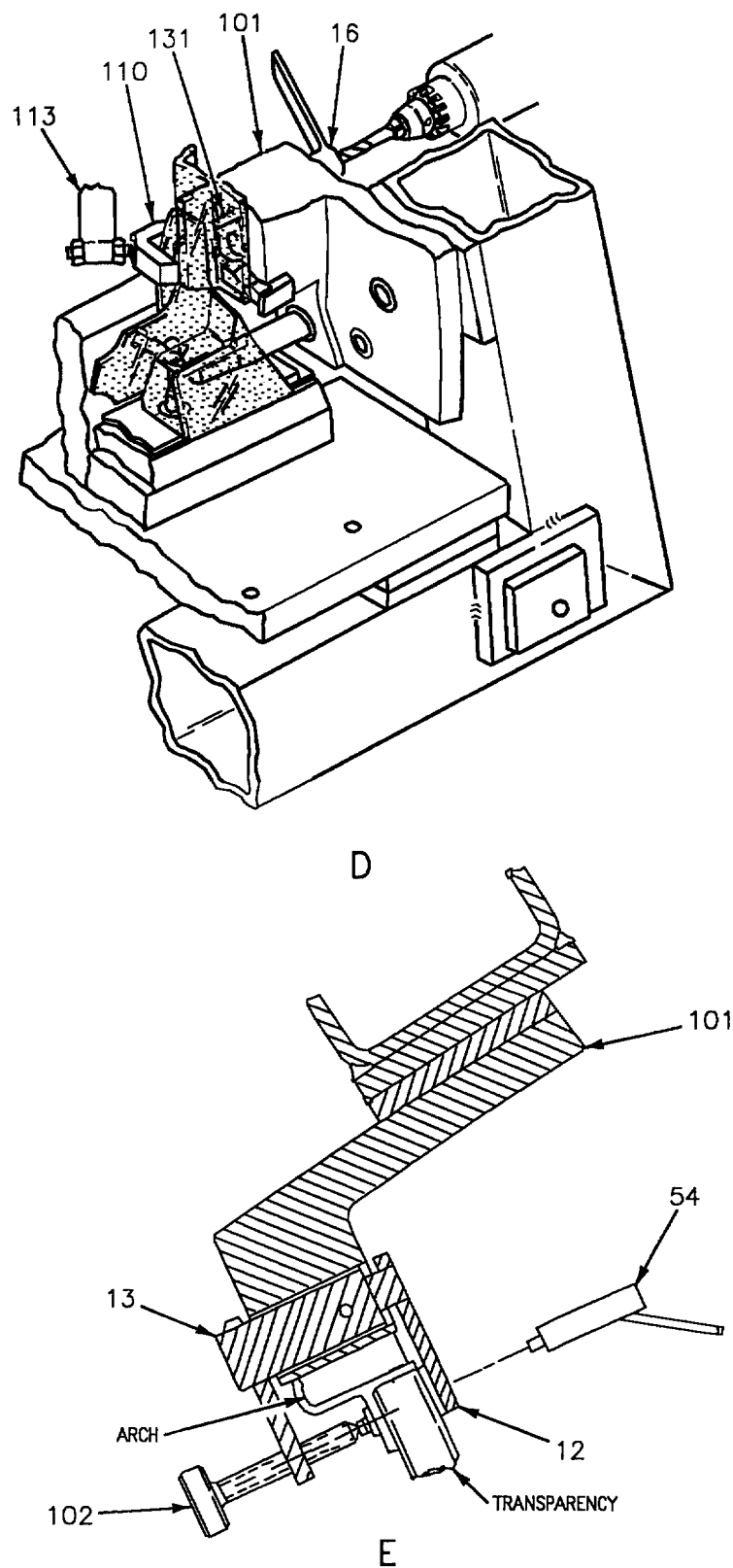


Figure 1. Inspection or Replacement - Arch (Sheet 3)

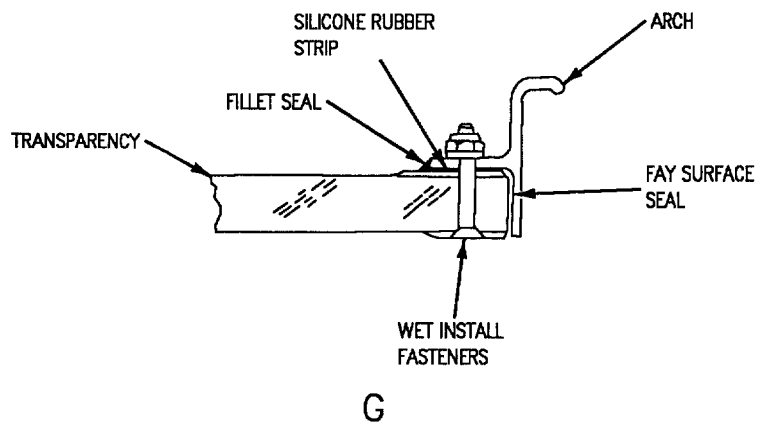
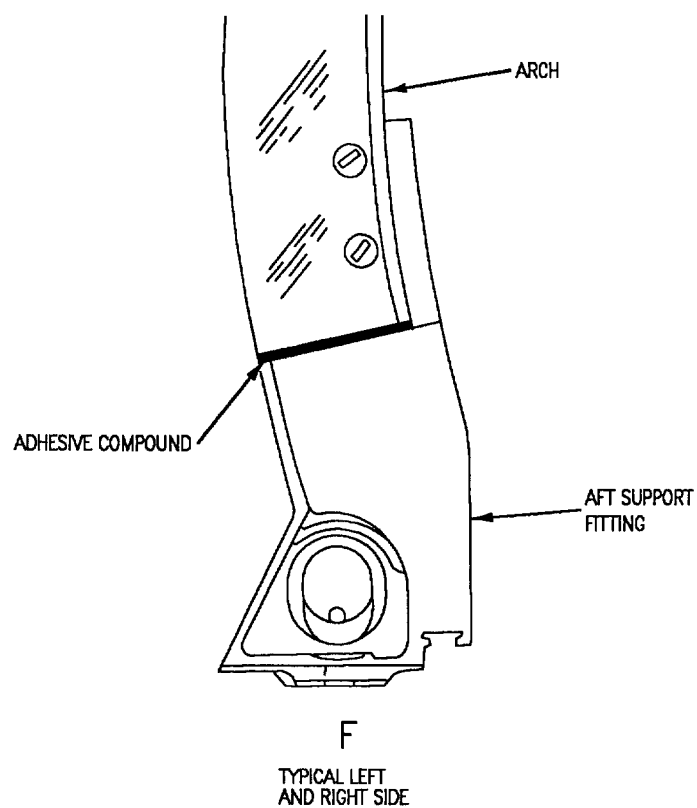


Figure 1. Inspection or Replacement - Arch (Sheet 4)

DETAIL NO.	NAME	FUNCTION
12	Clamp half	Clamps transparency to arch and clamp half (detail 13).
13	Clamp half	Clamps transparency to arch and clamp half (detail 12).
16	Traveler bushing	Guides 0.195 inch diameter drill.
54	Traveler bushing	Guides 0.1285 inch diameter drill.
101	Arch base	Base for arch locators.
102	Screw clamp	Clamps transparency to arch.
106	Locator	Multi - station locator for arch.
110	Nose piece	Part of two arch clamps at aft support fitting.
113	Clamp	Retains arch to locator (detail 106).
115	Pin	Part of F.S. locator for arch.
121	L-pin	Secures pin (detail 115) in location.
128	Nose piece	Rubber part of arch clamp.
131	Bushing liner	Guides traveler bushing (detail 16).
205	GO-NO GO gage	Determines if arch is in tolerance.

Figure 1. Inspection or Replacement - Arch (Sheet 5)

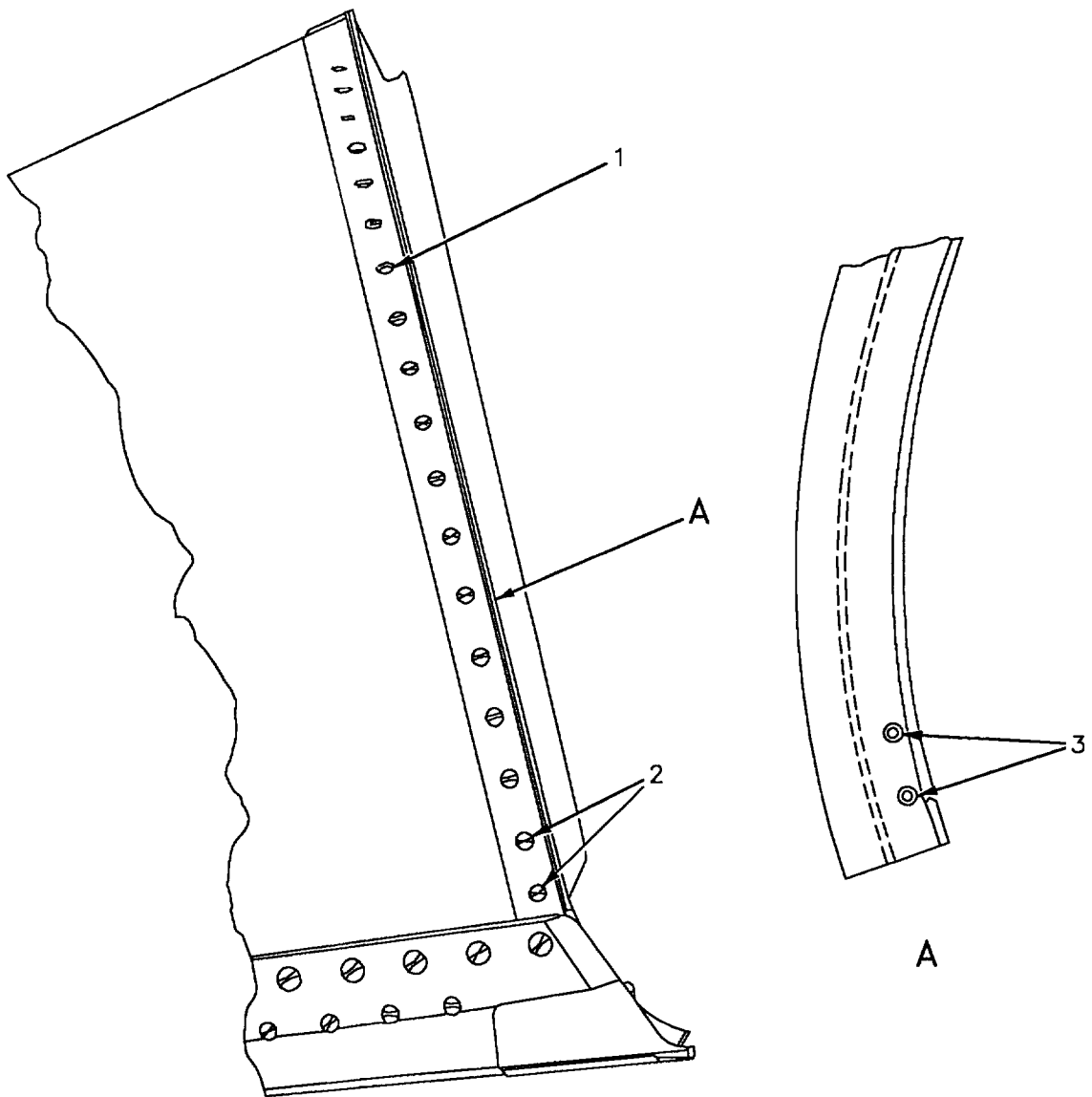


Figure 2. Arch Fastener Index (Sheet 1)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO.	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1	1 thru 20, 107 thru 125	39	0.195 +0.007 -0.000	PILOT 5 TFIM25.0215-004 NOM 4 SPT274A350004-5001TD 1ST OVS 4 SPT6RE174350004 2ND OVS 4 SPT7RE174350004 C'SINK 3 TFIM25.014-104	NAS663V15HT 2	AN960C10L		NAS1291C3M
2	21, 22, 105, 106	4	0.195 +0.007 -0.000	PILOT 3 NOM 4 SPT274A350004-5001TD 1ST OVS 4 SPT6RE174350004 2ND OVS 4 SPT7RE174350004 C'SINK 3 TFIM25.014-104	NAS663V17HT 2	AN960C10L		NAS1291C3M
3	222, 223, 224, 225	4	0.195 +0.007 -0.000	TFIM25.0204-120 3	NAS663V4HT 2	AN960C10L		NAS1291C3M
<p align="center">LEGEND</p> <p>1 For oversize repair fasteners, (A1-F18AC-SRM-200, WP004 07).</p> <p>2 Torque fastener to 30-35 inch lbs.</p> <p>3 This is part of 74D110325-1001 aircraft tool kit.</p> <p>4 This is part of RE274350002-1 windshield repair kit.</p> <p>5 This is part of RE274350006-1 canopy repair kit.</p>								

Figure 2. Arch Fastener Index (Sheet 2)

4. HINGE, 74A350615, INSPECTION AND REPLACEMENT. See figure 3.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, Windshield	RE174350002-1

Materials Required

Nomenclature	Specification or Part Number
Collar (4)	HL570-6MC
Pin (4)	HLT310DL-6-12

5. INSPECTION.



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

- a. Make sure windshield is loaded correctly and secure (WP004 01).
- b. Check inboard/outboard tolerance by inserting 0.125 inch shim between inboard faces of hinge locators (detail 252 and 253) and hinge.
- c. Check for alignment and twist of hinges by inserting L-pin (detail 266) through hinge and into bushing (detail 245) located in hinge locators (details 252 and 253), view A.

NOTE

Inspect pressure deck for warping or damage before replacing hinge (this WP).

- d. If hinges are out of alignment or damaged, replace.

6. REPLACEMENT.

- a. Remove four fasteners holding hinge to pressure deck.
- b. Remove 74A350747 shim located between hinge arm and pressure deck.
- c. Place new hinge on hinge locators (detail 252 or 253).
- d. Insert L-pin (detail 266) through hinge and into bushing (detail 245) located in hinge locator (details 252 or 253), view A.
- e. Insert 0.125 inch shim between inboard faces of hinge locator (detail 252 or 253) and 74A350615 hinge, view A.
- f. Adjust riser (detail 270) to keep clamp (detail 48) parallel with hinge locator (detail 252 or 253), view A.
- g. Secure hinge and 0.125 inch shim to hinge locator (detail 252 or 253) by using clamp (detail 48) and tightening knurled nut (detail 268), view A.
- h. Insert 0.125 inch shim between hinge arm and hinge locator (details 252 or 253), view B.
- i. Clamp hinge arm to hinge locator (details 252 or 253) using C-clamp, view B.
- j. Install 74A350747 shim between hinge arm and pressure deck.
- k. Mate drill four 0.1895 +0.0022 -0.0000 inch diameter holes in 74A350615 hinge using existing holes in 74A350602 pressure deck.
- l. Install hinge to 74A350602 pressure deck using four HLT310DL-6-12 pins and HL570-6MC collars.
- m. Apply finish system to hinge (A1-F18AC-SRM-500, WP021 00).

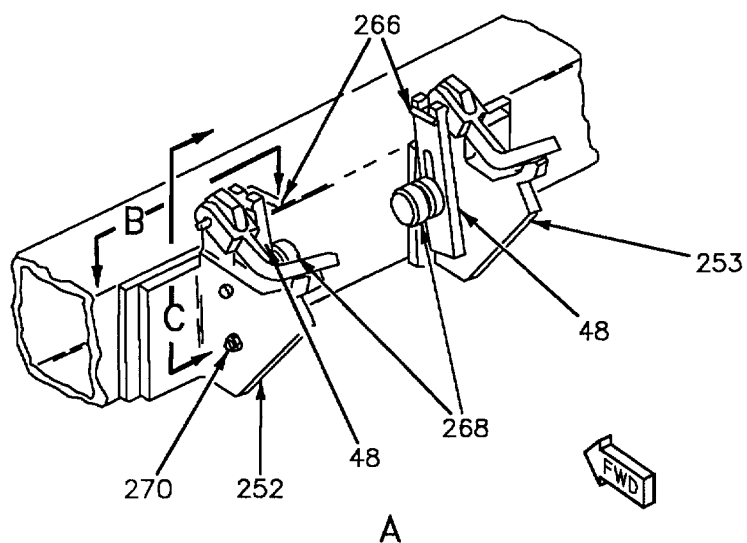
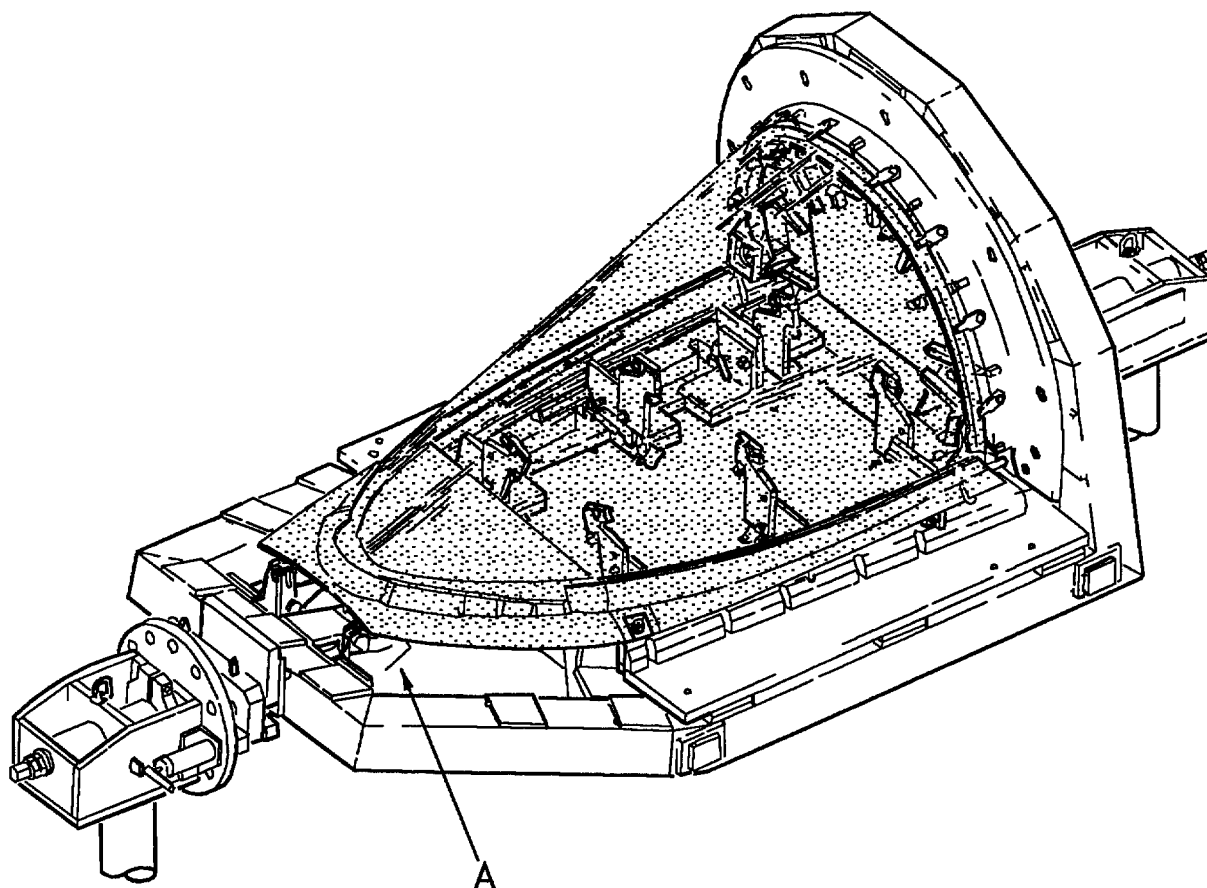


Figure 3. Inspection or Replacement - Hinge (Sheet 1)

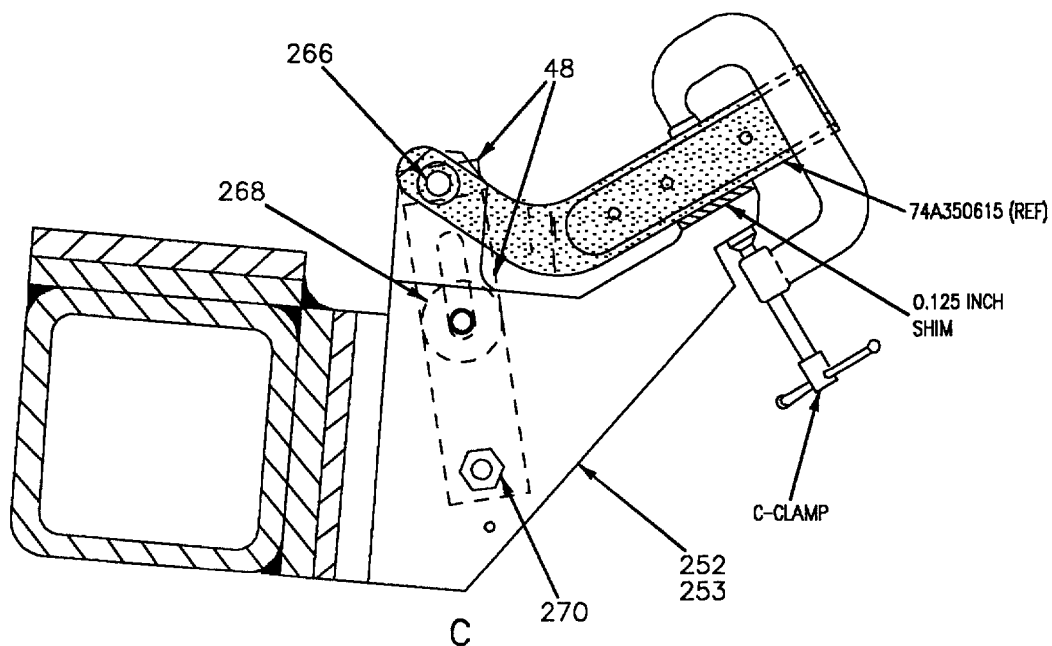
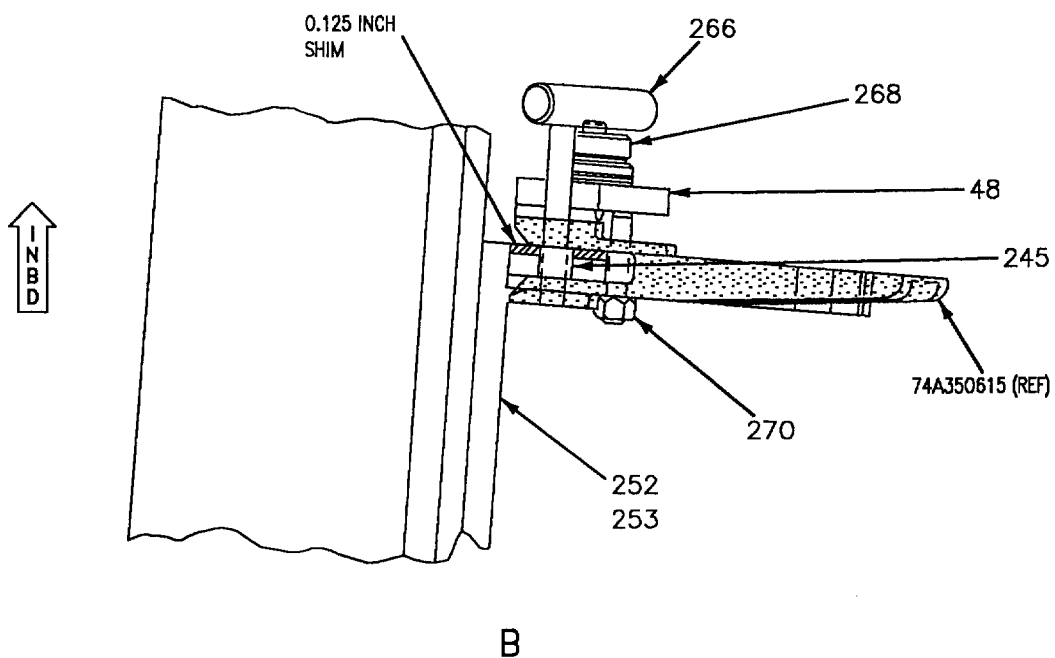


Figure 3. Inspection or Replacement - Hinge (Sheet 2)

DETAIL NO.	NAME	FUNCTION
48	Clamp	Secure hinges to hinge locator (detail 252 or 253).
245	Bushing	Locates CL on hole for hinge locator (detail 252 or 253).
252	Hinge locator	Provides X, Y, Z station location for hinge L/H.
253	Hinge locator	Provides X, Y, Z station location for hinge R/H.
266	L-pin	Pins hinge to hinge locator (detail 252 or 253).
268	Knurled nut	Provides pressure to clamp (detail 48) which clamps hinges.
270	Riser	Provides alignment adjustments for clamp (detail 48).

Figure 3. Inspection of Replacement - Hinge (Sheet 3)

7. **AFT SUPPORT FITTING, 74A350608, INSPECTION AND REPLACEMENT.** See figure 4.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, Windshield	RE174350002-1
Repair Kit, Canopy	RE274350006-1
Repair Kit, Windshield	RE274350002-1

Materials Required

Nomenclature	Specification or Part Number
Adhesive Compound	EA960F
Cheesecloth	CCC-C-440, Type 1, Class 1
Cloth, Cleaning	Rymple Cloth-301-Purified
Methyl Ethyl Ketone	TT-M-261

8. INSPECTION.

a. Remove shim (detail 172) when checking tolerance on aft support fittings.



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

b. Make sure windshield is loaded correctly and secure (WP004 01).

c. Check inboard/outboard tolerance by inserting pin (detail 162) through drill bushing (detail 273) located in arch base (detail 101) and into latch points on aft support fitting, view A.

d. Check vertical tolerance by inserting 0.125 inch feeler gage between upper surface of tool sills (detail 134 and 135) and bottom surface of aft support fitting, view E.

e. Check fuselage attaching hole location for aft support fitting.

(1) Insert handknob (detail 30) into 0.312 inch diameter hole, view C.

(2) Insert handknob (detail 25) into 0.257 inch diameter hole, view F.

(3) Insert pin assembly (detail 161) through drill bushing (detail 175) in support base (details 160 or 181) into 0.531 inch diameter hole, view F.

f. Replacement is required if pins do not slide freely through bushings and aft support fitting.

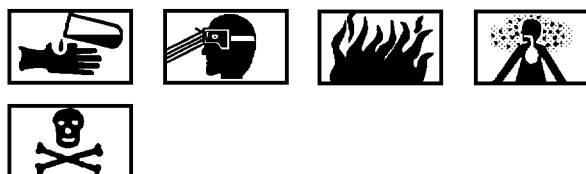
9. REPLACEMENT.

a. Remove transparency (WP004 03).

b. Remove fasteners holding aft support fitting to 74A350604 arch, 74A350605 outboard side frame, and 74A350609 inboard side frame. See figure 5 for fastener location.

c. Remove support fitting.

d. Clean all residual sealing compound and adhesive compound from mating structure on 74A350604 arch and 74A350609 inboard side frame using plastic scraper.



Methyl Ethyl Ketone

5

e. Clean mating surfaces with clean cheesecloth moistened with methyl ethyl ketone.

f. Position angle (details 179 or 180) on base (details 132 or 133). See view B.

(1) Align angle on base using two bullet nose dowels (detail 174).

(2) Secure angle to base using handknob (detail 170).

g. Position shim (details 172) on tool sills (details 134 or 135), view B.

h. Position aft support fitting on shim (detail 172) and slide aft to contact arch locator (detail 106), view B.

i. Install 0.125 shim between locating screws (detail 176) and aft support fitting, view C.

NOTE

A scrap shim should be placed between locating button (detail 159) and aft support fitting to protect the surface from marring.

j. Adjust locating button (detail 159) until aft support fitting is secured against locating screws (detail 176), view C.

k. Install clamp (detail 173) and secure to aft support fitting by tightening handknob (detail 29), view C.

l. Adjust riser (detail 182) to keep clamp (detail 173) parallel, view C.

m. Insert pin (detail 162) through drill bushing (detail 273) located in arch base (detail 101) to check alignment of latch hole in aft support fitting, view A.

n. At hole location 228 or 230, do substeps below:

(1) Install traveler bushing (detail 23) through drill bushing (detail 184) at hole 228 or 230 located in tool sill (details 134 or 135), view D.

(2) Drill one 0.312 +0.007 -0.000 inch diameter hole in aft support fitting per figure 5.

(3) Install handknob (detail 30) through drill bushing (detail 184) at hole 228 or 230 located in tool sill (details 134 or 135) and secure to aft support fitting by tightening knurled nut (detail 183), view C.

o. Install traveler bushing (detail 167) through drill bushing (detail 166) at hole 229 or 231 located in tool sill (details 134 or 135), view G.

p. Drill one 0.257 +0.006 -0.000 inch diameter hole 1.43 inch in depth in aft support fitting per figure 5.

q. At hole location 232 or 233, see view G and substeps below:

(1) Install traveler bushing (detail 163) through drill bushing (detail 175) located in support base (details 160 or 181).

(2) Drill one 0.312 inch diameter pilot hole 1.77 inch in depth per figure 5.

(3) Remove traveler bushing (detail 163) and install traveler bushing (detail 164) through drill bushing (detail 175) located in support base (details 160 or 181).

(4) Spotface a 0.515 inch diameter hole to clean up inclined surface on aft support fitting, per figure 5.

(5) Drill one 0.515 inch diameter hole 1.77 inch in depth per figure 5.

(6) Remove traveler bushing (detail 164) and install traveler bushing (detail 165) through drill bushing (detail 175) located in support base (details 160 or 181).

(7) Finish ream 0.5310 +0.0005 -0.0010 inch diameter hole 1.77 inch in depth per figure 5.

r. At hole locations 229 or 231 and 232 or 233, see view F and substeps below:

(1) Install pin (detail 161) through drill bushing (detail 175) at hole 232 or 233 located in support base (detail 160 or 181).

(2) Install handknob (detail 25) through drill bushing (detail 166) at hole 229 or 231 located in tool sill (detail 134 or 135).

(3) Engage threaded end of handknob (detail 25) into pin (detail 161) to clamp aft support fitting against shim (detail 172), view F.

s. At hole locations 222, 223 or 224, 225; do substeps below:

(1) Position 7A350747 shims between 74A350604 arch and aft support fitting, view H.

(2) Secure with clamp (detail 113) and nose piece (detail 110), view A.

(3) Install traveler bushing (detail 16) through drill bushing (detail 131) located in arch base (detail 101), view A.

(4) Drill two 0.195 +0.007 -0.000 inch diameter holes in aft support fitting per figure 5.

t. Mate drill from 74A350605 outboard side frame; see figure 5 and substeps below:

(1) At hole location 174 or 198; mate drill 0.195 +0.007 -0.000 inch diameter hole.

(2) At hole locations 23, 24 or 103, 104; mate drill 0.257 +0.007 -0.000 inch diameter holes.

u. Mate drill 0.195 +0.007 -0.000 inch diameter hole from 74A350609 inboard side frame (3, figure 5).

v. At hole locations 21, 22 or 105, 106; see figure 5 and substeps below:

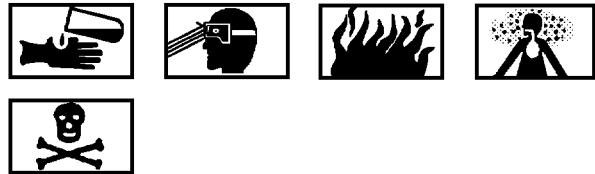
(1) Install traveler bushing (detail 54) into hole location on 74A350604 arch, view J.

(2) Mate drill two 0.1285 inch pilot holes.

(3) Drill pilot holes full size per figure 5.

w. Position 74A350747 shim on aft support fitting, view H.

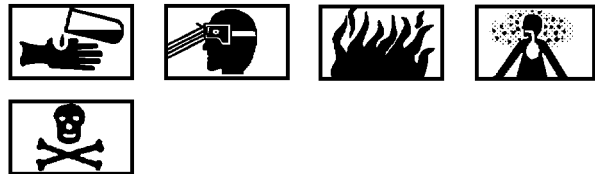
x. Install aft support and seal to 74A350604 arch:



Methyl Ethyl Ketone

5

(1) Clean area receiving sealing compound with cleaning cloth moistened with methyl ethyl ketone.



Adhesive Compound

21

(2) Prepare adhesive compound EA960F.

(3) Mix 50 parts B to 100 parts A until adhesive compound has turned pink in color.

(4) Apply adhesive to a maximum thickness of 0.03 inch to area where arch and aft support fitting mate, view J.

y. Apply finish system to aft support fitting (A1-F18AC-SRM-500, WP021 00).

z. Install transparency (WP004 03).

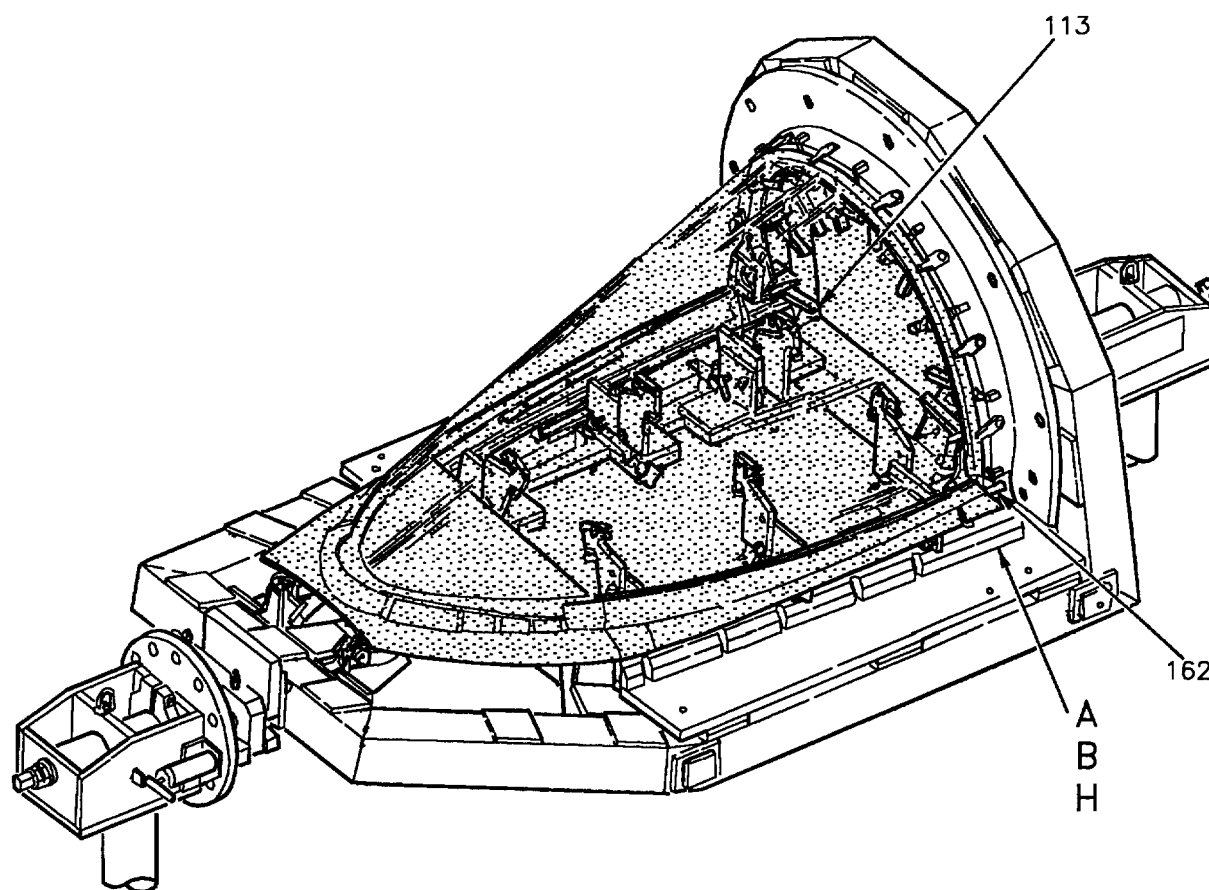


Figure 4. Inspection or Replacement - Aft Support Fitting (Sheet 1)

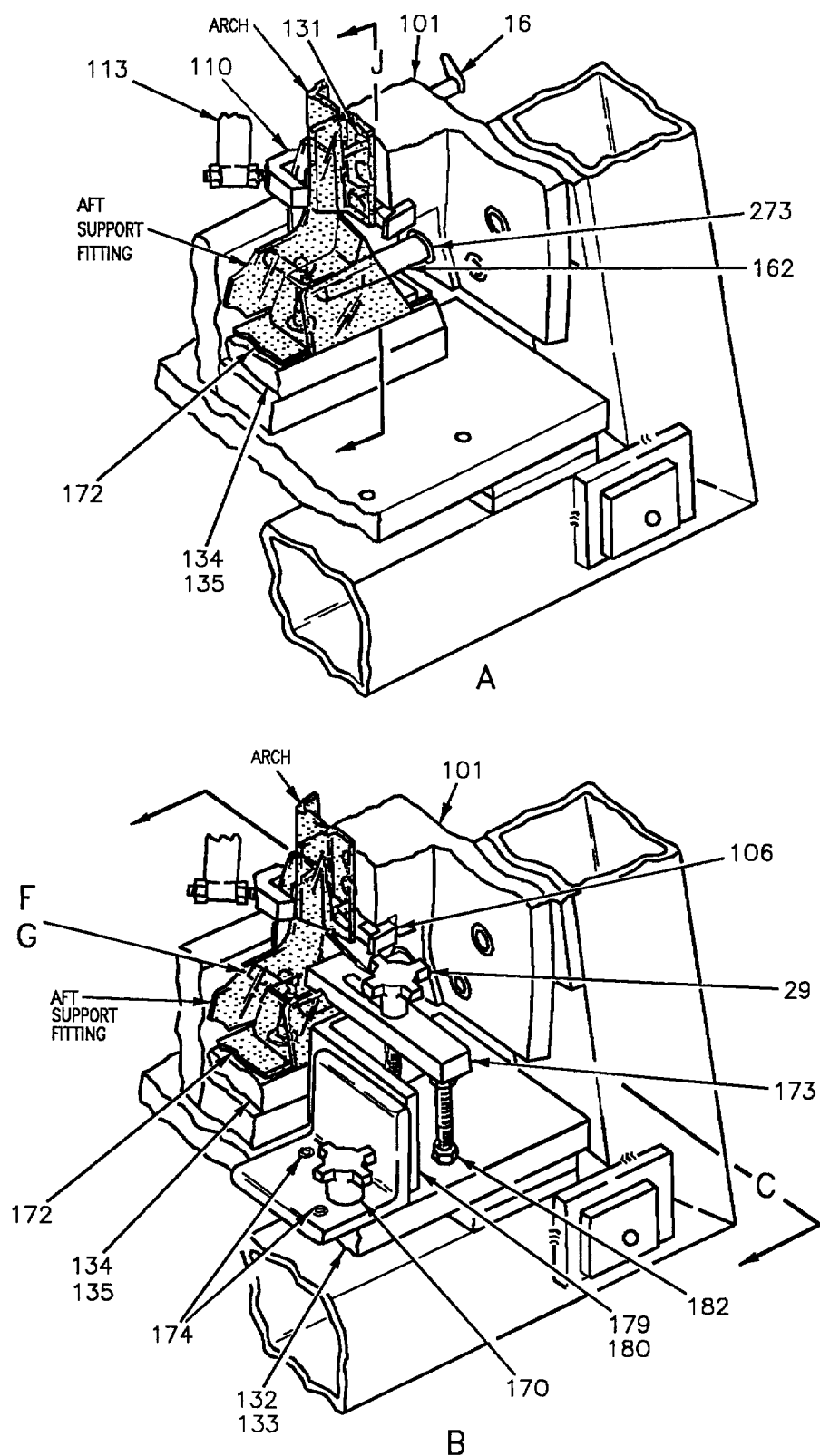


Figure 4. Inspection or Replacement - Aft Support Fitting (Sheet 2)

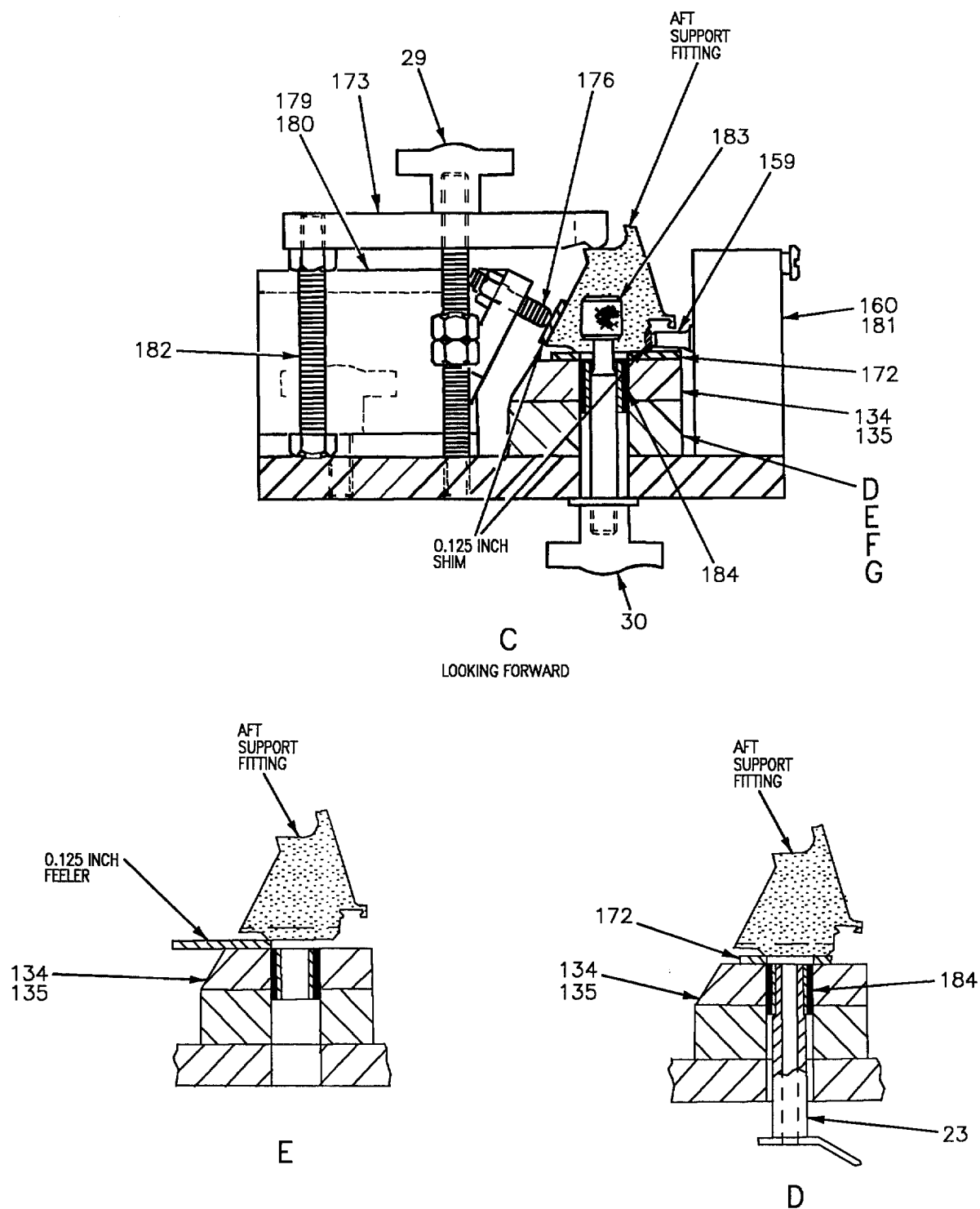
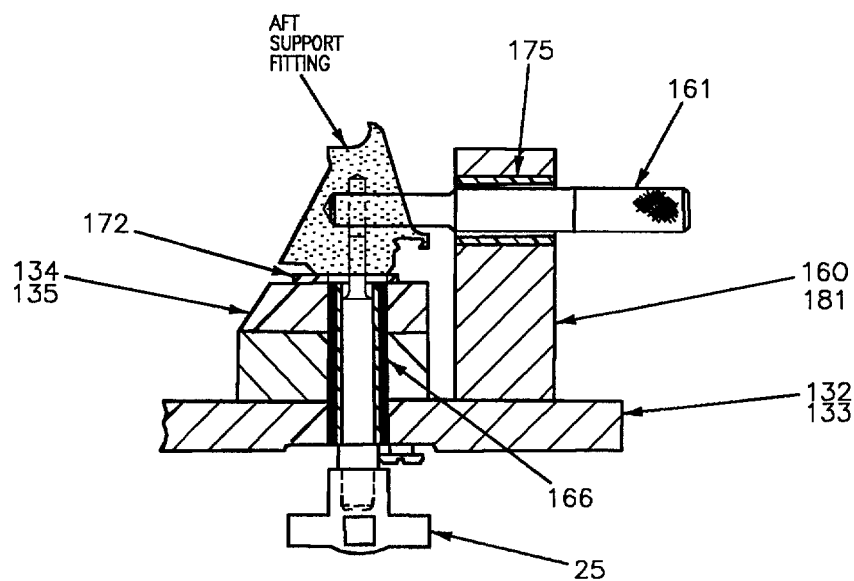
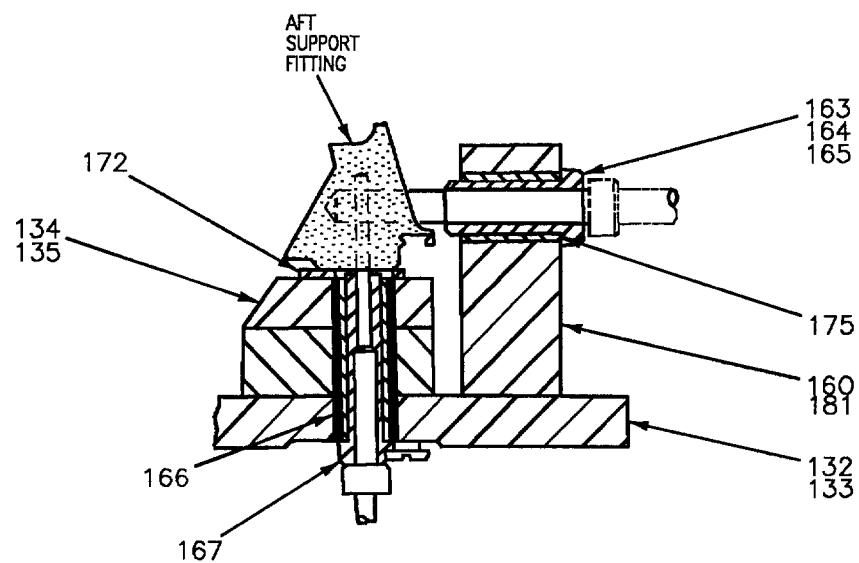


Figure 4. Inspection or Replacement - Aft Support Fitting (Sheet 3)



F



G

Figure 4. Inspection or Replacement - Aft Support Fitting (Sheet 4)

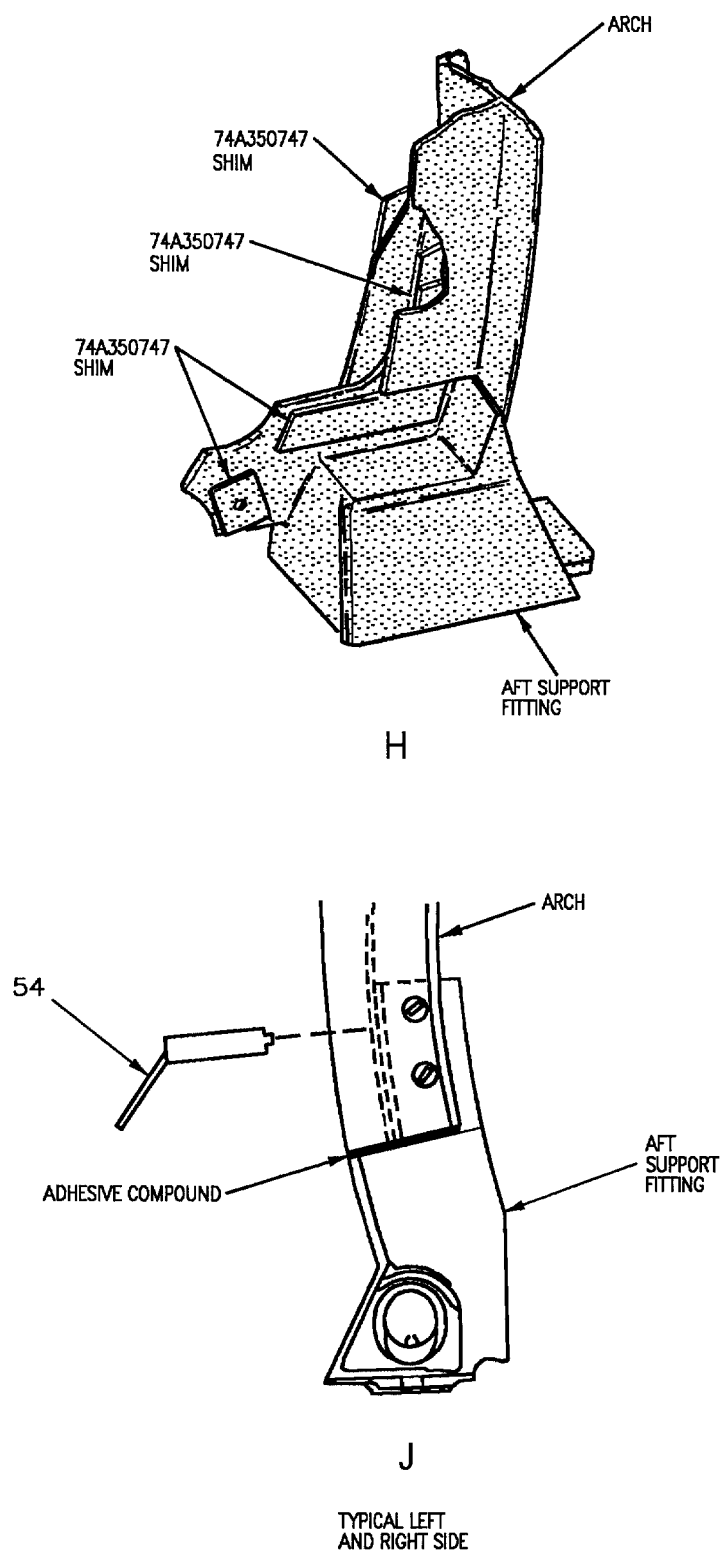


Figure 4. Inspection or Replacement - Aft Support Fitting (Sheet 5)

DETAIL NO.	NAME	FUNCTION
16	Traveler bushing	Guides 0.195 inch diameter drill.
23	Traveler bushing	Guides 0.312 inch diameter drill.
25	Handknob	Used to cross pin with pin (detail 161).
29	Handknob	Used to clamp aft support fitting for drilling.
30	Handknob	Used to retain aft support fitting to fixture.
54	Traveler bushing	Guides 0.1285 inch diameter drill.
101	Arch base	Secures arch locators to the fixture.
106	Locator	Multi-station locator for arch.
110	Nose piece	Part of two arch clamps at aft support fitting.
113	Clamp	Retains arch to locator (detail 106).
131	Drill bushing	Guides bushing traveler (detail 16) to drill 0.195 inch diameter hole.
132	Base	Provides means to secure sill locator to fixture L/H.
133	Base	Provides means to secure sill locator to fixture R/H.
134	Tool sill	Simulates sill reference plane and mold line.
135	Tool sill	Simulates sill reference plane and mold line.
159	Locating button	Secures aft support fitting to locating screw (detail 176).
160	Support base	Provides attaching points for L/H details.
161	Pin	Provides Y station location for aft support fitting.
162	Pin	Provides X station location for aft support fitting.
163	Traveler bushing	Guides 0.312 inch diameter drill.
164	Traveler bushing	Guides 0.515 inch diameter drill and end mill.
165	Traveler bushing	Guides 0.5310 inch diameter reamer.
166	Drill bushing	Guides traveler bushing (detail 167).
167	Traveler bushing	Guides 0.257 inch diameter drill.

Figure 4. Inspection or Replacement - Aft Support Fitting (Sheet 6)

DETAIL NO.	NAME	FUNCTION
170	Handknob	Secure angle (detail 179 or 180).
172	Shim	0.125 inch shim fills gap between tool sill (detail 134 or 135) and aft support fitting.
173	Clamp	Retains aft support fitting during drilling operations.
174	Bullet nose dowels	Aligns angle (detail 179 or 180).
175	Drill bushing	Bushing for pin (detail 161).
176	Locating screw	Locates aft support fitting in X station location.
179	Angle	L/H base for securing locating screw (detail 176) to fixture.
180	Angle	R/H base for securing locating screw (detail 176) to fixture.
181	Support base	Provides attaching points for R/H details.
182	Riser	Keeps clamp (detail 173) parallel.
183	Knurled nut	Fastens to handknob (detail 30) and secures aft support fitting.
184	Drill bushing	Bushing for 0.312 hole.
273	Drill bushing	Bushing for pin (detail 162).

Figure 4. Inspection or Replacement - Aft Support Fitting (Sheet 7)

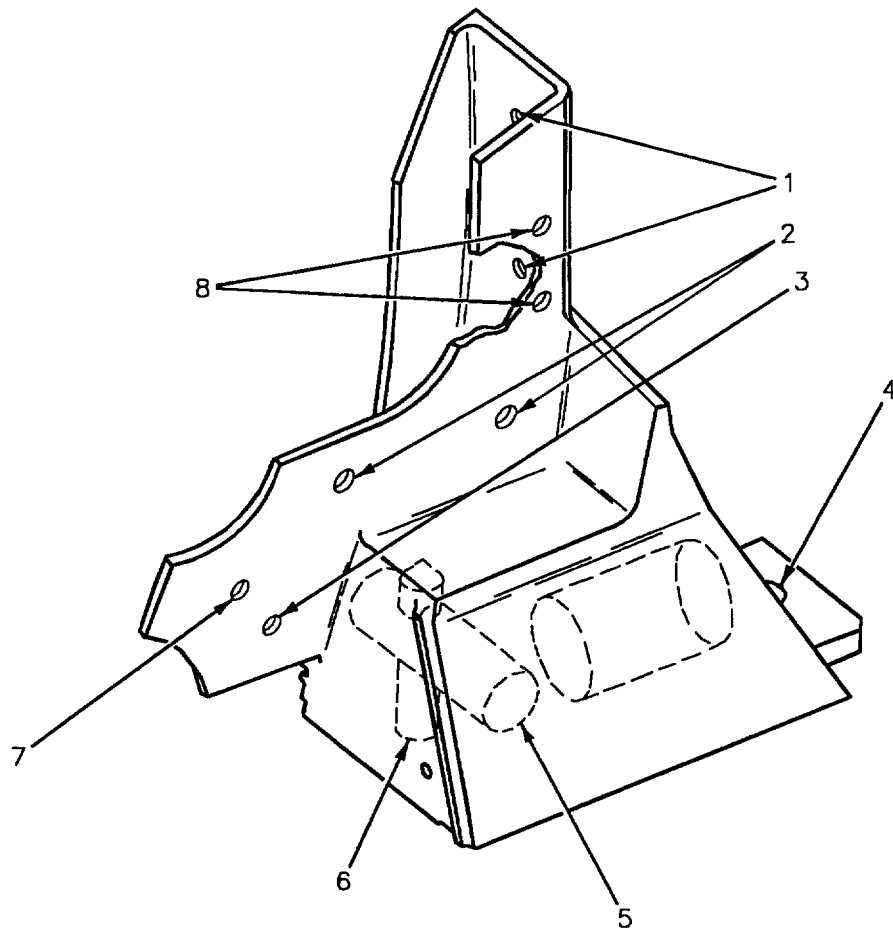


Figure 5. Aft Support Fitting Fastener Index (Sheet 1)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO.	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1	222, 223, 224, 225	4	0.195 +0.007 -0.000	TFIM25.0204-124 6	NAS663V4HT	AN960C10L		NAS1291C3M 2
2	23, 24, 103, 104	4	0.257 +0.007 -0.000	PILOT 8 TFIM25.0215-038 NOM 7 SPT674A350002-5001TD 1ST OVS 7 SPT8RE174350002 2ND OVS 7 SPT9RE174360002 C'SINK 6 TFIM25.014-135	NAS664V18HT NAS664V24HT 4	AN960C416L		NAS1291C3M 2
3		2	0.195 +0.007 -0.000	TFIM25.0204-124 6	NAS673V6	AN960C10L 5		NAS1291C3M 2
4	228, 230	2	0.312 +0.007 -0.000	TFIM25.0204-182 6				
5	232, 233	2	0.5310 +0.007 -0.000	PILOT 7 SPT74A350002-5001TD SPOTFACE 7 SPT274A350002-5001TD NOM 7 SPT374A350002-5001TD REAM 7 SPT474A350002-5001TD				
6	229, 231	2	0.257 +0.006 -0.000	SPT574A350002-5001TD 7				
7	174, 198	2	0.195 +0.007 -0.000	TFIM.0204-124 6	NAS663V20HT	AN960C10L	ST3M166-3-102	NAS1291C3M 2
8	21, 22, 105, 106	4	0.195 +0.007 -0.000	PILOT 8 TFIM25.0215-004 NOM 7 SPT274A350004-5001TD 1ST OVS 7 SPT6RE174350004 2ND OVS 7 SPT7RE174350004 C'SINK 6 TFIM25.014-104	NAS663V17HT	AN960C10L		NAS1291C3M 2

Figure 5. Aft Support Fitting Fastener Index (Sheet 2)










INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO.	FASTENER 	WASHER	SPACER BUSHING	RETAINER
LEGEND								
	1 For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07).							
	2 Torque fasteners to 15-25 inch lbs.							
	3 Torque fasteners to 30-35 inch lbs.							
	4 Right hand side only.							
	5 Two washers, one under bolt head.							
	6 This is part of 74D110325-1001 aircraft tool kit.							
	7 This is part of RE274350002-1 windshield repair kit.							
	8 This is part of RE274350006-1 canopy repair kit.							

Figure 5. Aft Support Fitting Fastener Index (Sheet 3)

10. **INBOARD SIDE FRAME, 74A350609, INSPECTION AND REPLACEMENT.** See figure 6.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, Windshield	RE174350002-1
Repair Kit, Canopy	RE274350006-1
Repair Kit, Windshield	RE274350002-1

Materials Required

Nomenclature	Specification or Part Number
Adhesive	RTV-106
Cheesecloth	CCC-C-440, Type 1, Class 1
Cloth, Cleaning	Rymple Cloth-301-Purified
Isopropyl Alcohol	TT-I-735, Grade B
Methyl Ethyl Ketone	TT-M-261
Sealing Compound	PR-1725, B-2

11. INSPECTION.



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

a. Make sure windshield is loaded correctly and secure (WP004 01).

NOTE

It may be necessary to remove some fasteners and sealing compound that could interfere with details.

b. Rotate inboard side frame locators (details 147, 152, 229 or 146, 153, 231) in position and secure by installing L-pin (detail 137), view A.

c. If gap exists on inboard side frame locators (details 147, 152, 229 or 146, 153, 231) or cannot be swung into position and secured with L-pin (detail 137) due to interference, repeat step a.

d. With handknob (detail 136) retracted, check gap between inboard side frame locators (detail 147, 152, 229 or 146, 153, 231) and inner surface of inboard side frames using 0.125 inch feeler gage, view B.

e. Replace inboard side frame if damaged or out of tolerance.

12. REPLACEMENT.

a. Remove transparency (WP004 03).

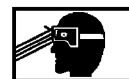
b. Remove fasteners attaching inboard side frame to mating structure, see figure 7.

c. Remove 74A350605 outboard side frame.

d. Remove 74A350611 forward support fitting.

e. Remove inboard side frame.

f. Clean all residual sealing compound from mating structure with a plastic scraper.



Methyl Ethyl Ketone

5

g. Clean mating structure with cheesecloth moistened with methyl ethyl ketone.

h. Position new inboard side frame into tool.

i. Rotate inboard side frame locators (details 147, 152, 229 or 146, 153, 231) in position and secure by installing L-pin (detail 137), view A.

j. Position a 0.125 inch contoured shim between inboard side frame locators (details 147, 152, 229 or 146, 153, 231) and inner surface of inboard side frame, view B.

k. Engage clamps (details 17, 18, 155, 228), view B.

l. Tighten handknob (detail 19) to position inboard side frame in mold line location, view B.

m. Tighten handknob (detail 136) against Z plane locator (detail 20), view B.

n. Locate drill blanket (details 14 or 15) on base (details 132 or 133) by inserting L-pins (detail 122) and secure by installing handknobs (detail 123), view A.

o. At holes 174 through 183, 186 through 197 or 198 through 207, 210 through 221:

(1) Insert traveler bushing (detail 27).

(2) Drill 0.3120 +0.0022 -0.0000 inch diameter hole, see figure 7.

p. At holes 184, 185 or 208, 209:

(1) Insert traveler bushing (detail 53).

(2) Drill 0.3770 +0.0007 -0.0000 inch diameter hole, see figure 7.

q. At holes 23 through 48 or 79 through 104:

(1) Temporarily install transparency (WP004 03).

(2) Insert traveler bushing (detail 55) into existing holes of transparency, view E.

(3) Pilot drill 0.1770 inch diameter holes, see figure 7.

(4) Remove transparency (WP004 03).

(5) Drill pilot holes full size, see figure 7.

r. Mate drill one 0.191 +0.006 -0.000 inch diameter hole from 74A350608 aft support fitting, (3, figure 7).

s. Mate drill two 0.191 +0.006 -0.000 inch diameter holes from 74A350611 forward support fitting (9, figure 7).



Adhesive

12

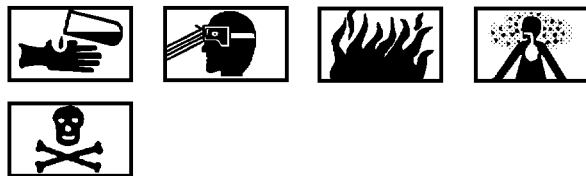
t. Remove inboard side frame from tool and install 74A350002 silicone rubber strip using RTV106 adhesive, view D.

u. Remove drill blanket (detail 14 or 15).

v. Deburr and apply finish system to inboard side frame (A1-F18AC-SRM-500, WP021 00).

w. Install inboard side frame to mating structure, see figure 7 for fasteners.

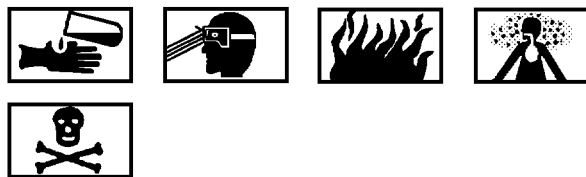
x. Install transparency and seal to inboard side frame. See view D and (WP004 03).



Isopropyl Alcohol

2

(1) Clean all surfaces on transparency and inboard side frame receiving sealing compound with cleaning cloth moistened with isopropyl alcohol.



Sealing Compound

20

(2) Prepare sealing compound by mixing base component and accelerator to a weighed ratio of 100 parts base component to 10 parts accelerator.

(3) Thoroughly mix components until a uniform color appears.

(4) Apply sealing compound per substeps below:

(a) Wet install fasteners. See figure 7 and (A1-F18AC-SRM-200, WP011 00).

(b) Fillet seal area indicated on view D (A1-F18AC-SRM-200, WP011 00).

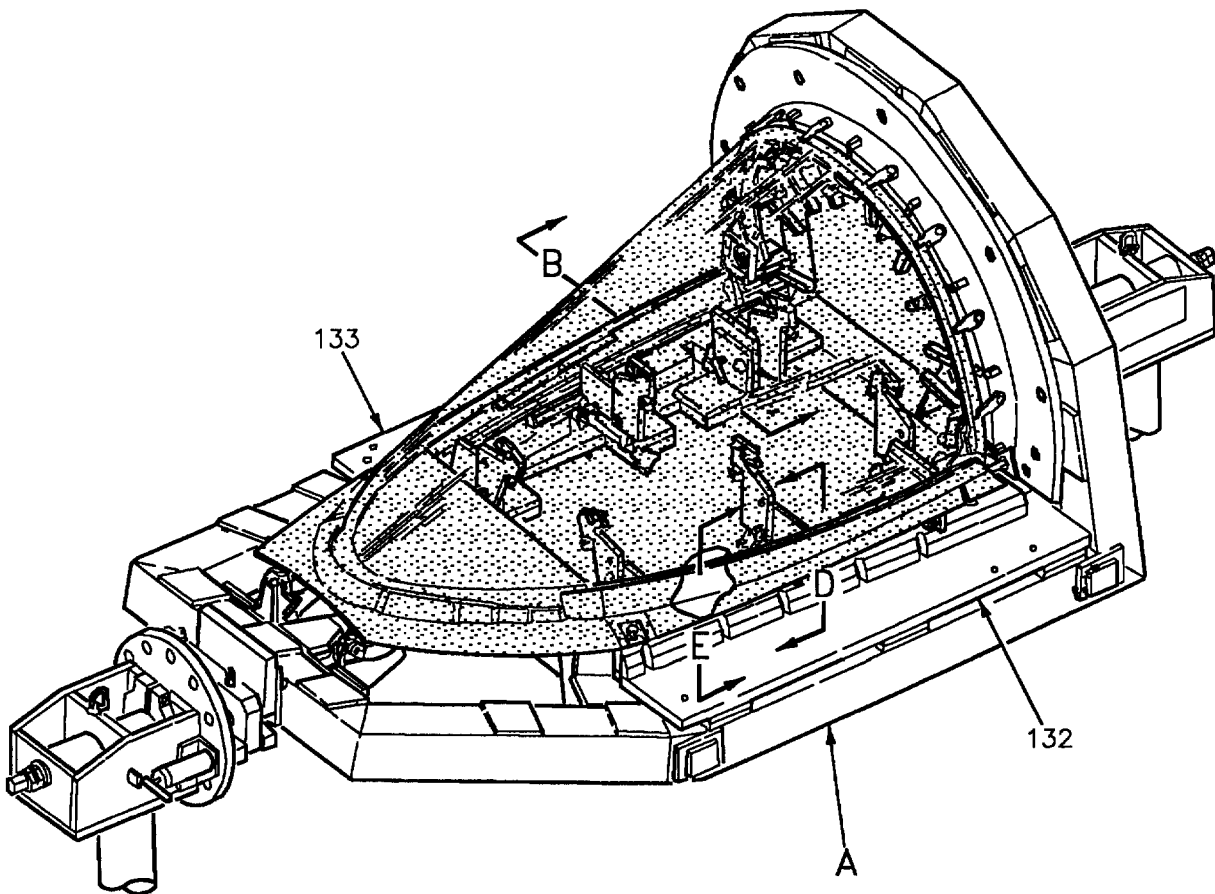


Figure 6. Inspection or Replacement - Inboard Side Frame (Sheet 1)

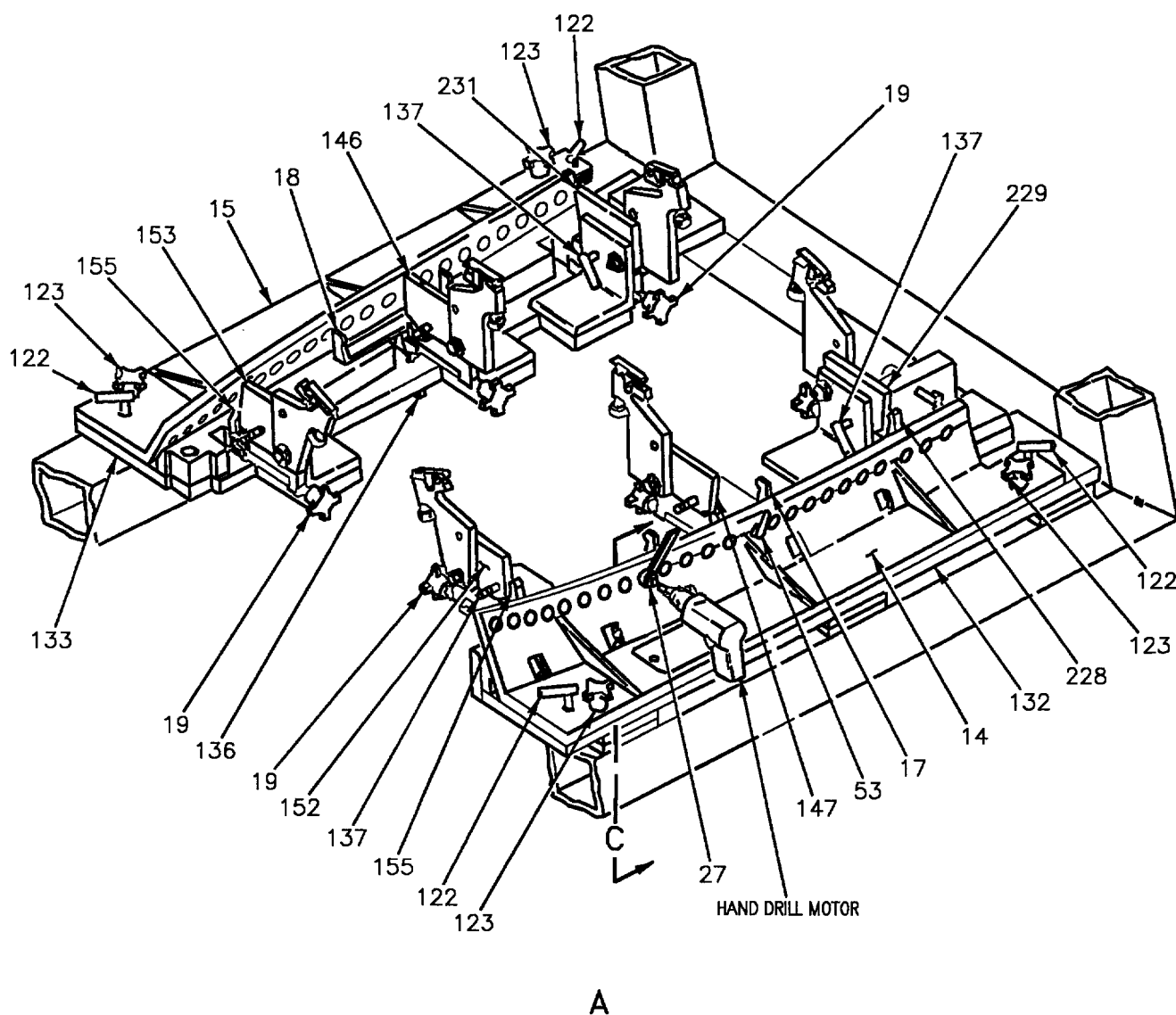


Figure 6. Inspection or Replacement - Inboard Side Frame (Sheet 2)

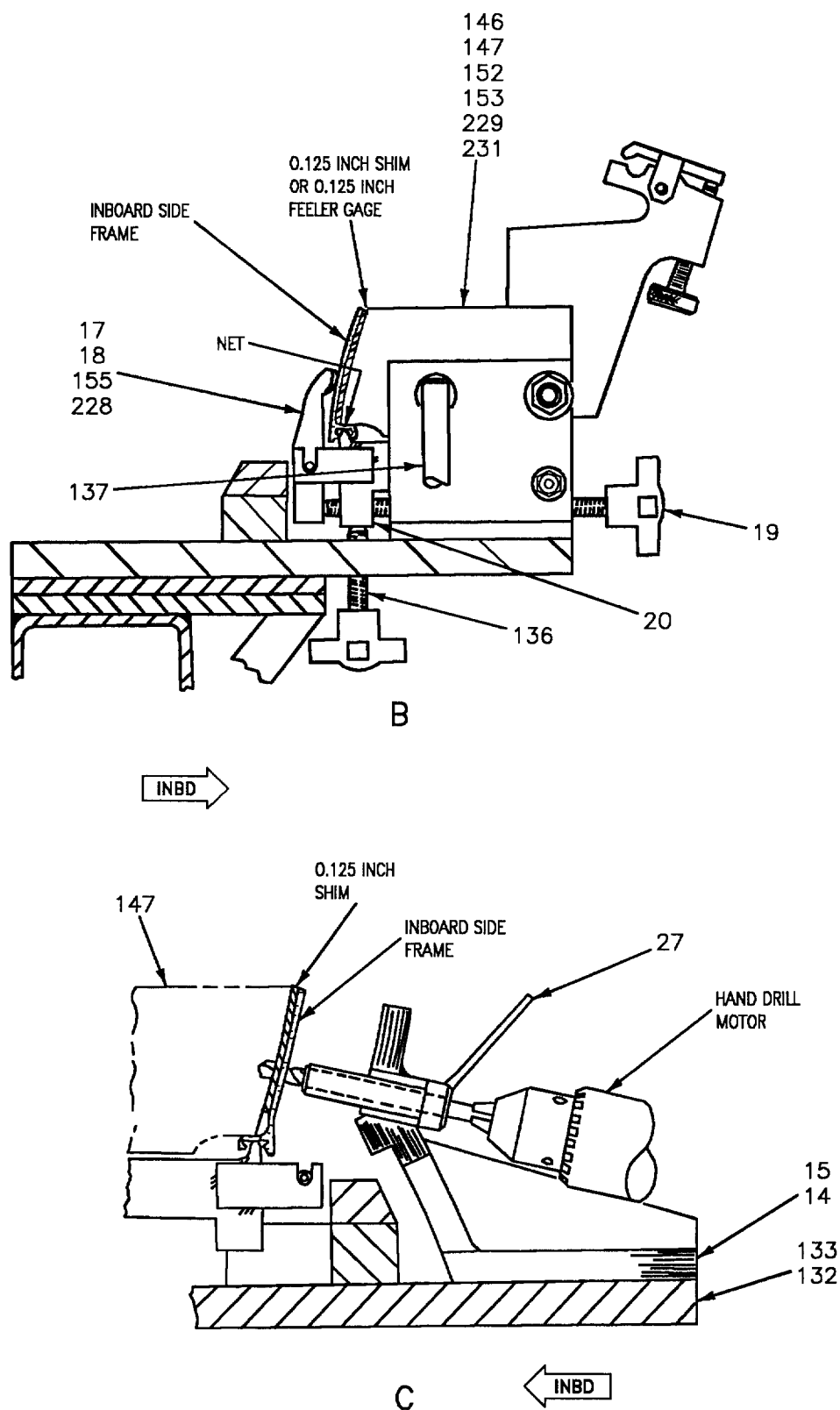


Figure 6. Inspection or Replacement - Inboard Side Frame (Sheet 3)

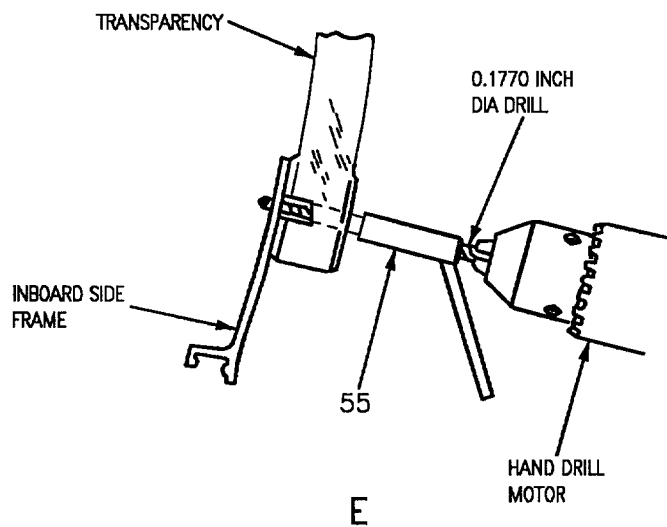
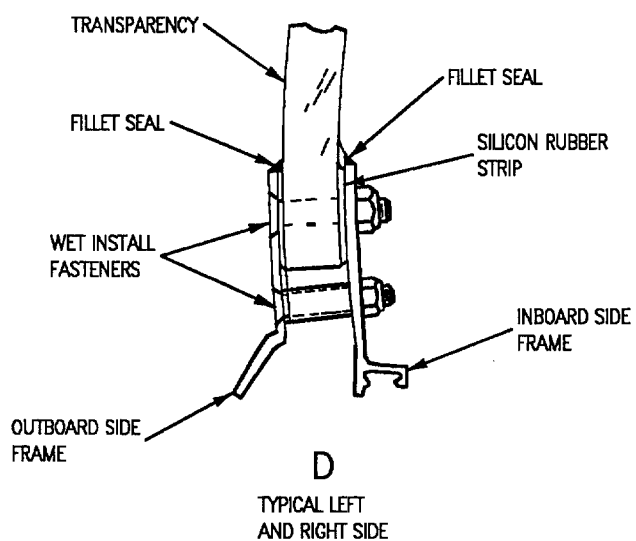


Figure 6. Inspection or Replacement - Inboard Side Frame (Sheet 4)

DETAIL NO.	NAME	FUNCTION
14	Drill blanket	Drills attach hole pattern for inboard side frame.
15	Drill blanket	Drills attach hole pattern for inboard side frame.
17	Clamp L/H	Used to retain inboard side frame.
18	Clamp R/H	Used to retain inboard side frame.
19	Handknob	Provides pressure to clamp.
20	Locator	For locating Z plane location of inboard side frame.
27	Traveler bushing	Guides 0.312 inch diameter drill.
63	Traveler bushing	Guides 0.377 inch diameter drill.
55	Traveler bushing	Guides 0.177 inch diameter drill.
122	L-pin	Locates drill blanket (details 14 and 15) to the fixture.
123	Handknob	Secures drill blanket (details 14 and 15) to the fixture.
132	Base	L/H base plate which mounts locator to fixture.
133	Base	RIH base plate which mounts locator to fixture.
136	Handknob	Provides pressure to retain inboard side frame against locator.
137	L-pin	Pins locator (details 146, 147, 152, 163, 229 or 231).
146	Locator	Provides X plane and Z plane location for inboard side frame.
147	Locator	Provides X plane and Z plane location for inboard side frame.
152	Locator	Provides X plane and Z plane location for inboard side frame.
153	Locator	Provides X plane and Z plane location for inboard side frame R/H.
155	Clamp	Used to retain inboard side frame.
228	Clamp	Used to retain inboard side frame.
229	Locator	Provides X plane and Z plane location for inboard side frame.
231	Locator	Provides X plane and Z plane location for inboard side frame.

Figure 6. Inspection or Replacement - Inboard Side Frame (Sheet 5)

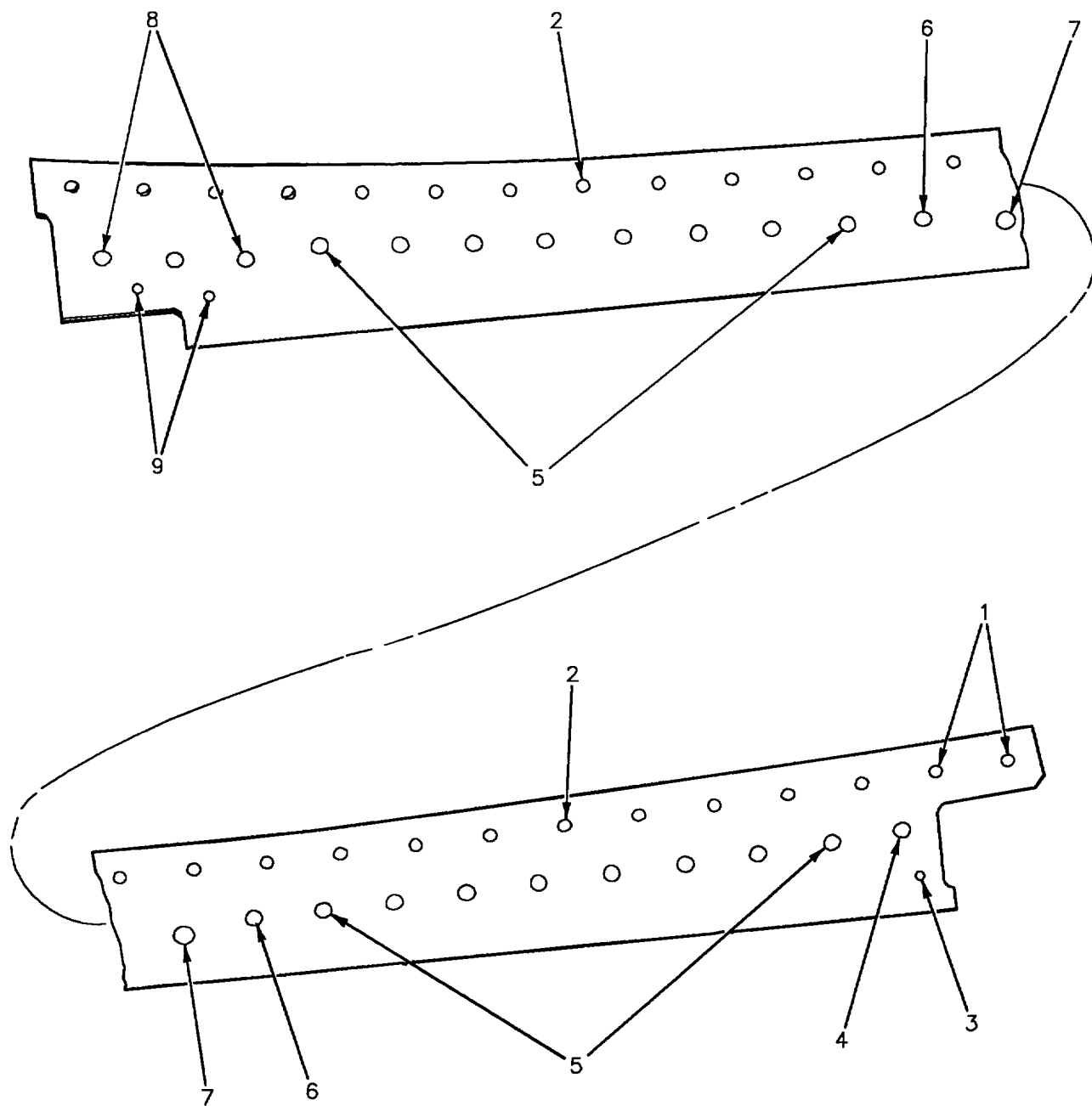


Figure 7. Inboard Side Frame Fastener Index (Sheet 1)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO.	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1	23, 24 103, 104	4	0.257 +0.006 -0.000	PILOT 8 TFIM25.0215-038 NOM 7 SPT674A350002-5001TD 1ST OVS 7 SPT8RE174350002 2ND OVS 7 SPT9RE174350002	NAS664V18HT NAS664V24HT 4	AN960C416L		NAS1291C4M 3
2	25 thru 48 79 thru 102	48	0.257 +0.006 -0.000	PILOT 8 TFIM25.0215-038 NOM 7 SPT674A350002-5001TD 1ST OVS 7 SPT8RE174350002 2ND OVS 7 SPT9RE174350002	NAS664V16HT	AN960C416L		NAS1291C4M 3
3		2	0.191 +0.006 -0.000	TFIM25.0204-120 6	NAS673V6	AN960C10L 5		NAS1291C3M 2
4	174, 198	2	0.3120 +0.0022 -0.0000	TFIM25.0204-182 6	NAS663V20HT	AN960C10L	ST4M166-3-102	NAS1291C3M 2
5	175 thru 182, 187 thru 194, 199 thru 206, 211 thru 218	32	0.3120 +0.0022 -0.0000	TFIM25.0204-182 6	NAS663V16HT	AN960C10L	ST4M166-3-104	NAS1291C3M 2
6	183, 186, 207, 210	4	0.3120 +0.0022 -0.0000	TFIM25.0204-182 6	NAS663V18HT	AN960C10L	ST4M166-3-006	NAS1291C3M 2
7	184, 185, 208, 209	4	0.3770 +0.0007 -0.0000		NAS664V18HT		NAS77A4-28	
8	195 thru 197 219 thru 221	6	0.3120 +0.0022 -0.0000	TFIM25.0204-182 6	NAS663V16HT	AN960C10L	ST4M-166-3-0045	NAS1291C3M 2
9		4	0.191 +0.006 -0.000	TFIM25.0204-120 6	NAS673V6	AN960C10L 5		NAS1291C3M 2

Figure 7. Inboard Side Frame Fastener Index (Sheet 2)










INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO.	FASTENER 	WASHER	SPACER BUSHING	RETAINER
LEGEND								
	For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07).							
	Torque fastener to 15-25 inch lbs.							
	Torque fastener to 50-60 inch lbs.							
	Right hand side only.							
	Two washers, one under bolt head.							
	This is part of 74D110325-1001 aircraft tool kit.							
	This is part of RE274350002-1 windshield repair kit.							
	This is part of RE274350006-1 canopy repair kit.							

Figure 7. Inboard Side Frame Fastener Index (Sheet 3)

13. FORWARD SUPPORT FITTING, 74A350611, INSPECTION AND REPLACEMENT. See figure 8.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, Windshield	RE174350002-1
Repair Kit, Windshield	RE274350002-1

Materials Required

Nomenclature	Specification or Part Number
Cheesecloth	CCC-C-440, Type 1, Class 1
Cloth, Cleaning	Rymple Cloth-301-Purified
Isopropyl Alcohol	TT-I-735, Grade B
Methyl Ethyl Ketone	TT-M-261
Sealing Compound	PR-1725, B-2

14. INSPECTION.

- a. Remove shim (detail 196) two places when checking tolerance on forward support fittings, view B.



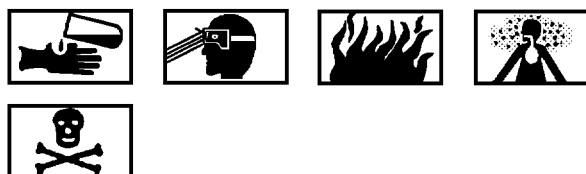
To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

- b. Make sure windshield is loaded correctly and secure (WP004 01).
- c. Check gap between the lower surface of forward support fitting and the upper surface of tool sill (details 134 or 135) using 0.312 inch feeler gage, view A.
- d. At hole 234 or 235, check location of 0.312 diameter hole in forward support fitting by inserting handknob (detail 30) through drill bushing (detail 184) into hole, view B.

- e. Replace forward support fitting if damaged or out of tolerance.

15. REPLACEMENT.

- a. Remove transparency (WP004 03).
- b. Remove fasteners attaching forward support fitting to mating structure, see figure 9.
- c. Remove forward support fitting and 74A350747 shims.
- d. Clean all residual sealing compound from mating structure using plastic scraper.



Methyl Ethyl Ketone

5

- e. Clean mating structure with clean cheesecloth moistened with methyl ethyl ketone.
- f. Position shim (detail 196) on tool sill (detail 134 or 135) and locate new forward support fitting on top of shim, view D.
- g. Extend locator (detail 204) and locate by installing L-pin (detail 203), view C.
- h. Install 0.125 inch shim between locator (detail 204) and forward support fitting, view C.
- i. Secure forward support fitting to locator (detail 204) by installing C-clamp, view C.
- j. Position locator (details 217 or 274) on base (details 132 or 133) and locate by installing L-pins (detail 137) and secure by installing handknob (detail 225), view D.
- k. Loosen C-clamp and adjust forward support fitting inboard to contact locator (details 217 or 274), view C.
- l. Install clamp (detail 206) and secure to forward support fitting by tightening handknob (detail 39), view C.
- m. Tighten C-clamp holding forward support fitting to locator (detail 204), view C.

n. At hole locations 234 or 235:

(1) Install traveler bushing (detail 23), view C.

(2) Drill one 0.312 +0.007 -0.000 inch diameter hole, see figure 9.

(3) Remove traveler bushing (detail 23) and install handknob (detail 30) through drill bushing (detail 184), view B.

(4) Engage knurled nut (detail 183) on handknob (detail 30) to secure forward support fitting to tool sill (details 134 or 135), view B.

o. Remove locator (details 217 or 274) and clamp (detail 206).

p. Locate drill blanket (details 14 or 15) on base (details 132 or 133) by inserting L-pins (detail 122) and secure by installing handknob (detail 123), view E.

q. At hole locations 195 through 197 or 219 through 221:

(1) Install traveler bushing (detail 27), view E.

(2) Drill three 0.3120 +0.0022 -0.0000 inch diameter holes, see figure 9.

r. Mate drill two 0.191 +0.006 -0.000 inch diameter holes from 74A350609 inboard side frame (7, figure 9).

s. Mate drill four 0.1635 +0.0022 -0.0000 inch diameter holes from 74A350602 pressure deck (5, figure 9).

t. Position 74A350601 seal retainer to maintain centerline of adjacent seal retainers, view G.

u. Mate drill three 0.129 +0.006 -0.000 inch diameter holes (6, figure 9).

v. Mate drill four 0.191 +0.006 -0.000 inch diameter holes from 74A350602 pressure deck (2, 3, and 4, figure 9).

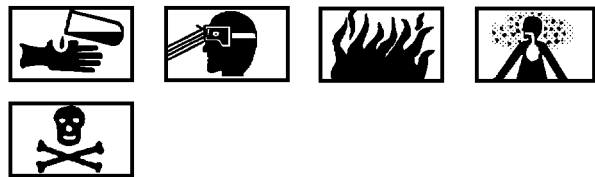
w. Deburr and apply finish system to forward support fitting (A1-F18AC-SRM-500, WP021 00).

x. Install forward support fitting and 74A350747 shims to mating structure, see view F and figure 9.

y. Install 74A350601 forward support seal retainer, see view G and figure 9.

z. Install transparency (WP004 03).

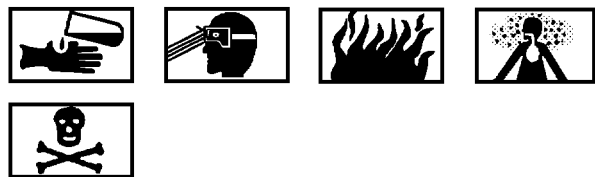
aa. Seal forward support fitting, see view G and substeps below:



Isopropyl Alcohol

2

(1) Clean surfaces receiving sealing compound with cleaning cloth moistened with isopropyl alcohol.



Sealing Compound

20

(2) Prepare sealing compound by mixing base component and accelerator to a weighed ratio of 100 parts base component to 10 parts accelerator.

(3) Thoroughly mix components until a uniform color appears.

(4) Apply sealing compound per substeps below:

(a) Wet install fasteners. See figure 9 (A1-F18AC-SRM-200, WP011 00).

(b) Butt gap seal area indicated on view G (A1-F18AC-SRM-200, WP011 00).

(c) Fillet seal area indicated on view G (A1-F18AC-SRM-200, WP011 00).

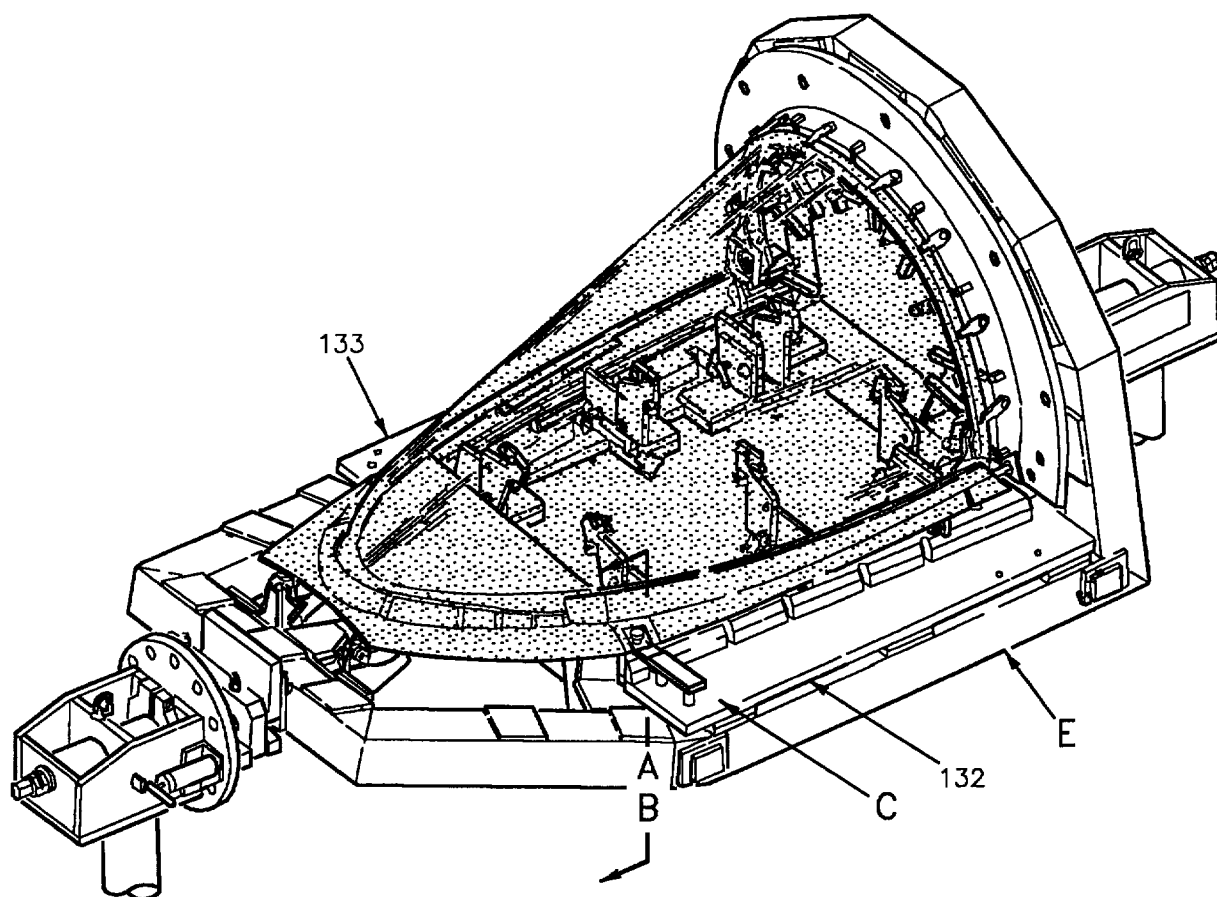


Figure 8. Inspection or Replacement - Forward Support Fitting (Sheet 1)

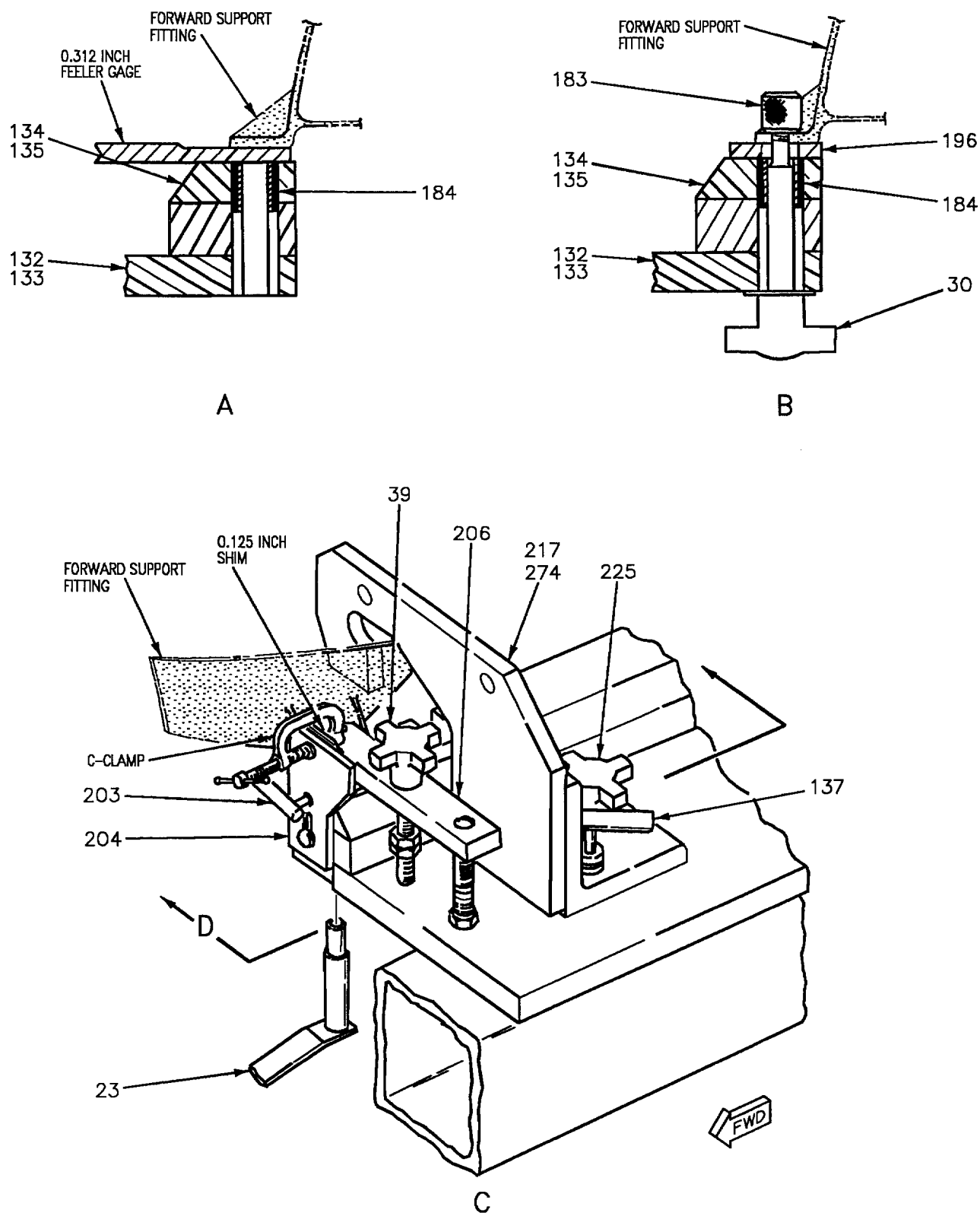


Figure 8. Inspection or Replacement - Forward Support Fitting (Sheet 2)

04020802

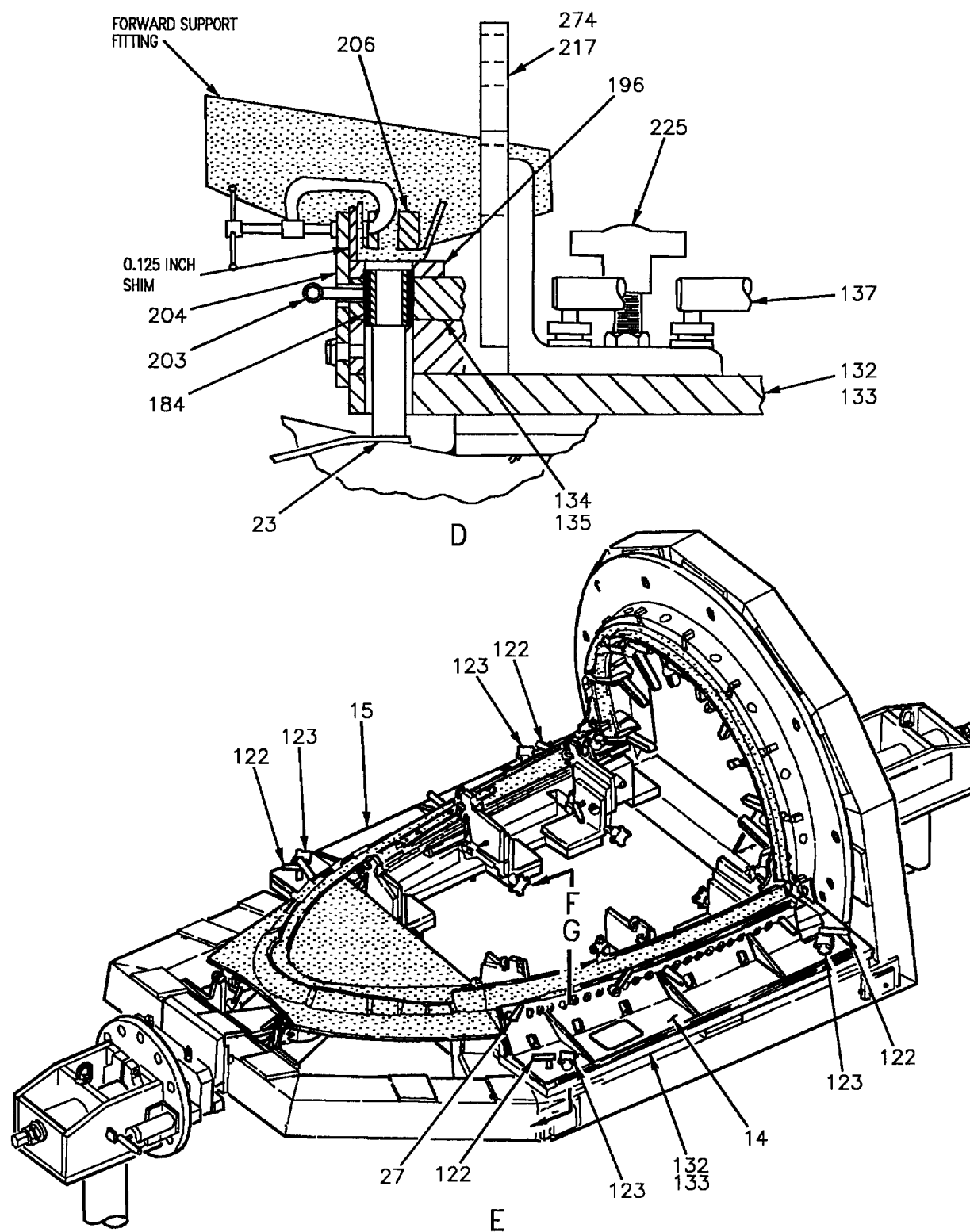


Figure 8. Inspection or Replacement - Forward Support Fitting (Sheet 3)

04020803

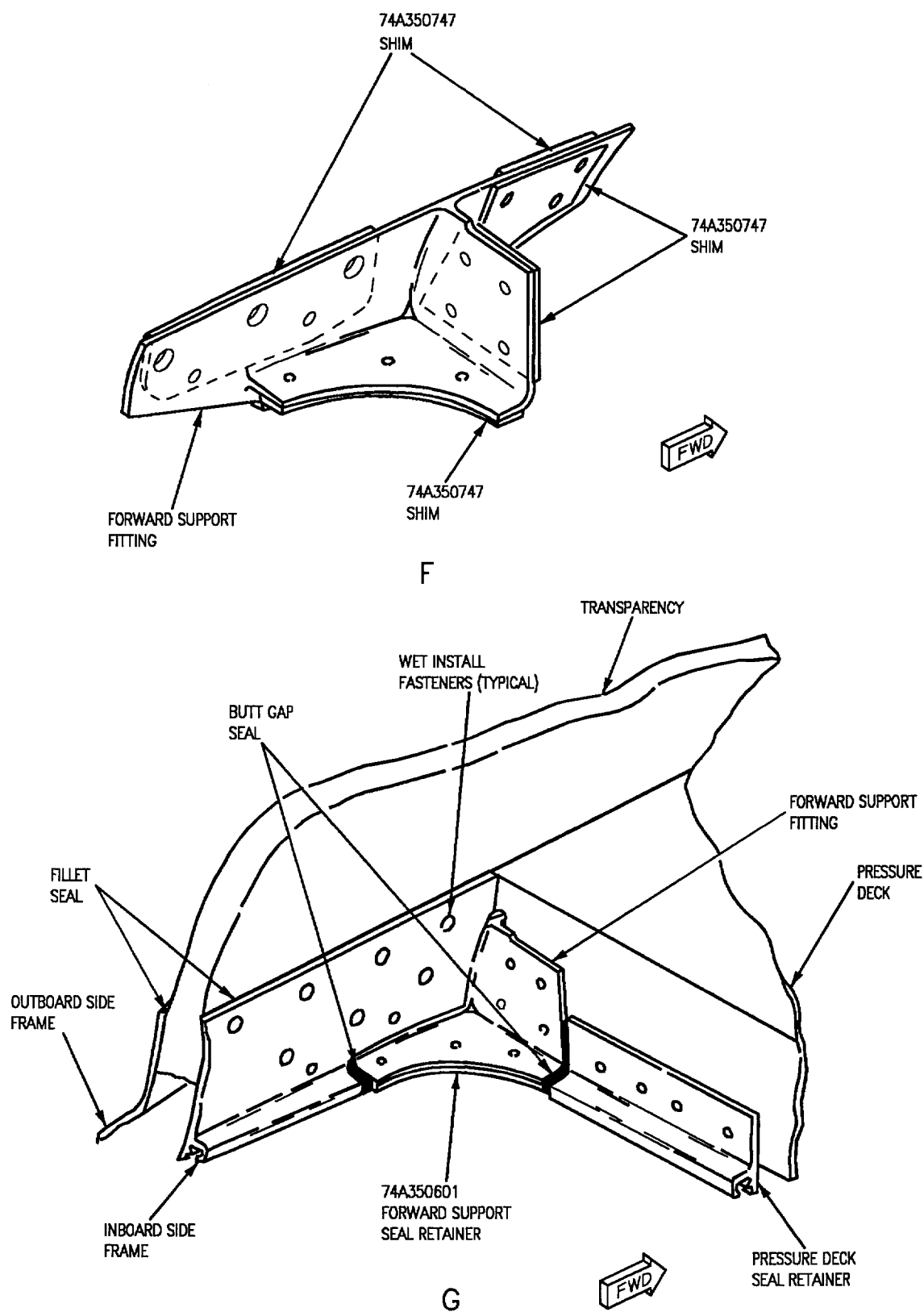


Figure 8. Inspection or Replacement - Forward Support Fitting (Sheet 4)

DETAIL NO.	NAME	FUNCTION
14	Drill blanket	Drills attach hole pattern for inboard and outboard side frame L/H.
15	Drill blanket	Drills attach hole pattern for inboard and outboard side frame R/H.
23	Traveler bushing	Guides 0.312 inch diameter drill.
27	Traveler bushing	Guides 0.312 inch diameter drill.
30	Handknob	Used to retain and locate forward support fitting.
39	Handknob	Secures clamp (detail 206) to forward support fitting.
122	L-pin	Used to locate drill blanket (details 14 or 15).
123	Handknob	Used to secure drill blanket (details 14 and 15).
132	Base	Provides means to attach locators to fixture L/H side.
133	Base	Provides means to attach locators to fixture R/H side.
134	Tool sill	Simulates sill reference plane and mold line L/H.
135	Tool sill	Simulates sill reference plane and mold line R/H.
137	L-pin	Locates locator (details 217 or 274).
183	Knurled nut	Fastens to handknob (detail 30) to secure forward support fitting.
184	Drill bushing	Bushing for 0.312 inch diameter hole.
196	Shim	Provides Z plane location for forward support fitting.
203	L-pin	Used to locate locator (detail 204).
204	Locator	Provides Y plane location for forward support fitting.
206	Clamp	Secures forward support fitting for drilling.
217	Locator	Provides X plane location for forward support fitting L/H.
225	Handknob	Secures locator (detail 217 or 274).
274	Locator	Provides X plane location for forward support fitting R/H.

Figure 8. Inspection or Replacement - Forward Support Fitting (Sheet 5)

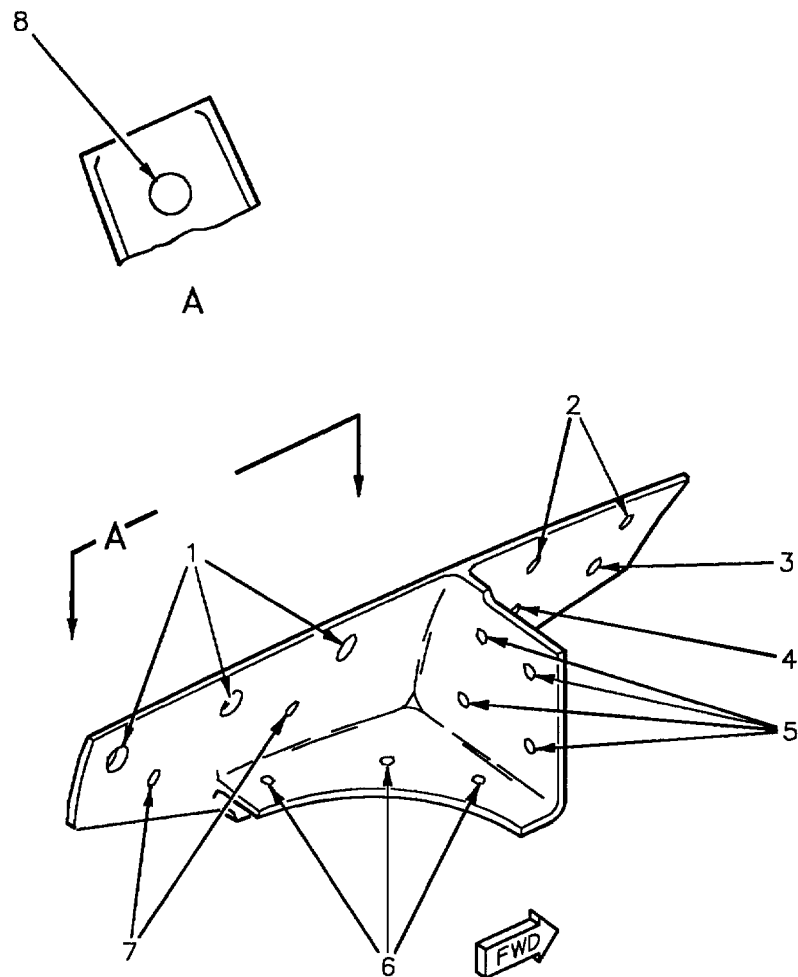


Figure 9. Forward Support Fitting Fastener Index (Sheet 1)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO.	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1	195 thru 197, 219 thru 221	6	0.3120 +0.0022 -0.0000	TFIM25.0204-182 4	NAS663V16HT 2	AN960C10L	ST4M166-3-045	NAS1291C3M
2		4	0.191 +0.006 -0.000	TFIM25.0204-120 4	NAS663V15HT 2	AN960C10L		NAS1291C3M
3		2	0.191 +0.006 -0.000	TFIM25.0204-120 4	NAS673V5 2	AN960C10L 3		NAS1291C3M
4		2	0.191 +0.006 -0.000	TFIM25.0204-120 4	NAS673V7 2	AN960C10L	ST4M130-03004 5	NAS1291C3M
5		8	0.1635 +0.0022 -0.0000		HLT310DL-5-10			HL570-5MC
6		6	0.129 +0.006 -0.000		MS20426AD4			
7		4	0.191 +0.006 -0.000	TFIM25.0204-120 4	NAS673V5 2	AN960C10L 3		NAS1291C3M
8	234, 235	2	0.312 +0.007 -0.000	TFIM25.0204-182 4				
<p align="center">LEGEND</p> <p>1 For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07).</p> <p>2 Torque fastener to 15-25 inch lbs.</p> <p>3 Two washers, one under bolt head.</p> <p>4 This is part of 74D110325-1001 aircraft tool kit.</p> <p>5 Install under bolt head.</p>								

Figure 9. Forward Support Fitting Fastener Index (Sheet 2)

16. OUTBOARD SIDE FRAME, 74A350605, INSPECTION AND REPLACEMENT. See figure 10.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, Windshield	RE174350002-1
Repair Kit, Canopy	RE274350006-1
Repair Kit, Windshield	RE274350002-1

Materials Required

Nomenclature	Specification or Part Number
Cheesecloth	CCC-C-440, Type 1, Class 1
Cloth, Cleaning	Rymple Cloth-301-Purified
Isopropyl Alcohol	TT-I-735, Grade B
Methyl Ethyl Ketone	TT-M-261
Sealing Compound	PR-1725, B-2

17. INSPECTION.



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

- Make sure windshield is loaded correctly and secure (WP004 01).

NOTE

Inspection may take place with transparency installed or removed.

- Locate drill blankets (details 14 and 15) on base (details 132 and 133) by inserting L-pins (detail 122) and secure by installing handknobs (detail 123).
- Check gap between the inboard surface of drill blanket (details 14 and 15) and mold line surface of outboard side frame using 0.125 inch feeler gage. Typical ten places, view C.

- Remove drill blankets (details 14 and 15).

- Locate trim bars (details 125 and 126) on base (details 132 and 133) by inserting L-pins (detail 275) and secure by installing handknob (detail 50), view A.

- Check trim location where outboard side frame mates with forward fuselage using scribe (detail 127), view B.

- Replace outboard side frame if damaged or out of tolerance.

18. REPLACEMENT.

- Remove transparency (WP004 03).

- Remove fasteners attaching outboard side frame to mating structure, see figure 11.

- Remove outboard side frame and forward fairing.

- Clean all residual sealing compound from mating structure with a plastic scraper.



Methyl Ethyl Ketone

5

- Clean mating structure with cheesecloth moistened with methyl ethyl ketone.

- Position new outboard side frame into tool.

- Rotate outboard side frame locators (details 148, 149, 230 or 154, 232, 233) in position and secure by installing L-pins (detail 137), view A.

- Position outboard side frame against EOP stop and mold line locator in outboard side frame locators (details 148, 149, 230 or 154, 232, 233), view D.

- Engage clamp (detail 21) by tightening thumb screw (detail 150) to secure outboard side frame in position, view D.

- Locate drill blanket (details 14 or 15) on base (details 132 or 133) by inserting L-pins (details 122) and secure by installing handknobs (detail 123).

- At holes 174 through 183, 186 through 197 or 198 through 207, 210 through 221:

(1) Install traveler bushing (detail 52), view D.

(2) Drill 0.196 +0.006 -0.000 inch diameter hole, see figure 11.

l. At holes 184, 185 or 208, 209:

(1) Install traveler bushing (detail 53), view D.

(2) Drill 0.250 +0.006 -0.000 inch diameter hole, see figure 11.

m. Remove drill blanket (details 14 or 15).

n. At holes 23 through 48 or 79 through 104:

(1) Install traveler bushing (detail 55) into existing holes of inboard side frame, view E.

(2) Back drill 0.1770 inch diameter pilot holes, see figure 11.

(3) Drill pilot holes full size, see figure 11.

o. Mate drill two 0.191 +0.006 -0.000 inch diameter holes from 74A350602 pressure deck (8, figure 11).

p. Mate drill four 0.196 +0.006 -0.000 inch diameter holes from 74350623 forward fairing (1, 7, figure 11).

q. Mate drill four 0.196 +0.006 -0.000 inch diameter holes from 74A350617 cover, door 24 (2, 6, and 7, figure 11).

r. Locate trim bar (details 125 or 126) on base (details 132 or 133) by inserting L-pins (detail 275) and secure by installing handknobs (detail 50), view A.

s. Scribe trim line where outboard side frame mates with forward fuselage using scribe (detail 127), view B.

t. Disengage clamp (detail 21) and retract outboard side frame locators (details 148, 149, 230 or 154, 232, 233).

u. Remove outboard side frame:

(1) Trim outboard side frame.

(2) Deburr and countersink fastener holes.

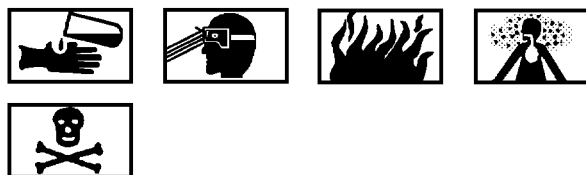
(3) Apply finish system to outboard side frame, (A1-F18AC-SRM-500, WP021 00).

(4) Install platenuts (A1-F18AC-SRM-200, WP004 05).

v. Install 74A350625 forward fairing and outboard side frame.

w. Install transparency (WP004 03).

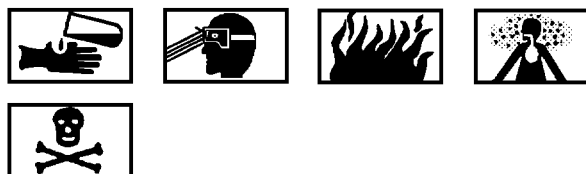
x. Seal outboard side frame to transparency:



Isopropyl Alcohol

2

(1) Clean all surfaces on transparency and mating surface receiving sealing compound with cleaning cloth moistened with isopropyl alcohol.



Sealing Compound

20

(2) Prepare sealing compound by mixing base component and accelerator to a weighed ratio of 100 parts base component to 10 parts accelerator.

(3) Thoroughly mix components until a uniform color appears.

(4) Apply sealing compound per substeps below:

(a) Wet install fasteners. See figure 11 and (A1-F18AC-SRM-200, WP011 00).

(b) Fillet seal area indicated on view F (A1-F18AC-SRM-200, WP011 00).

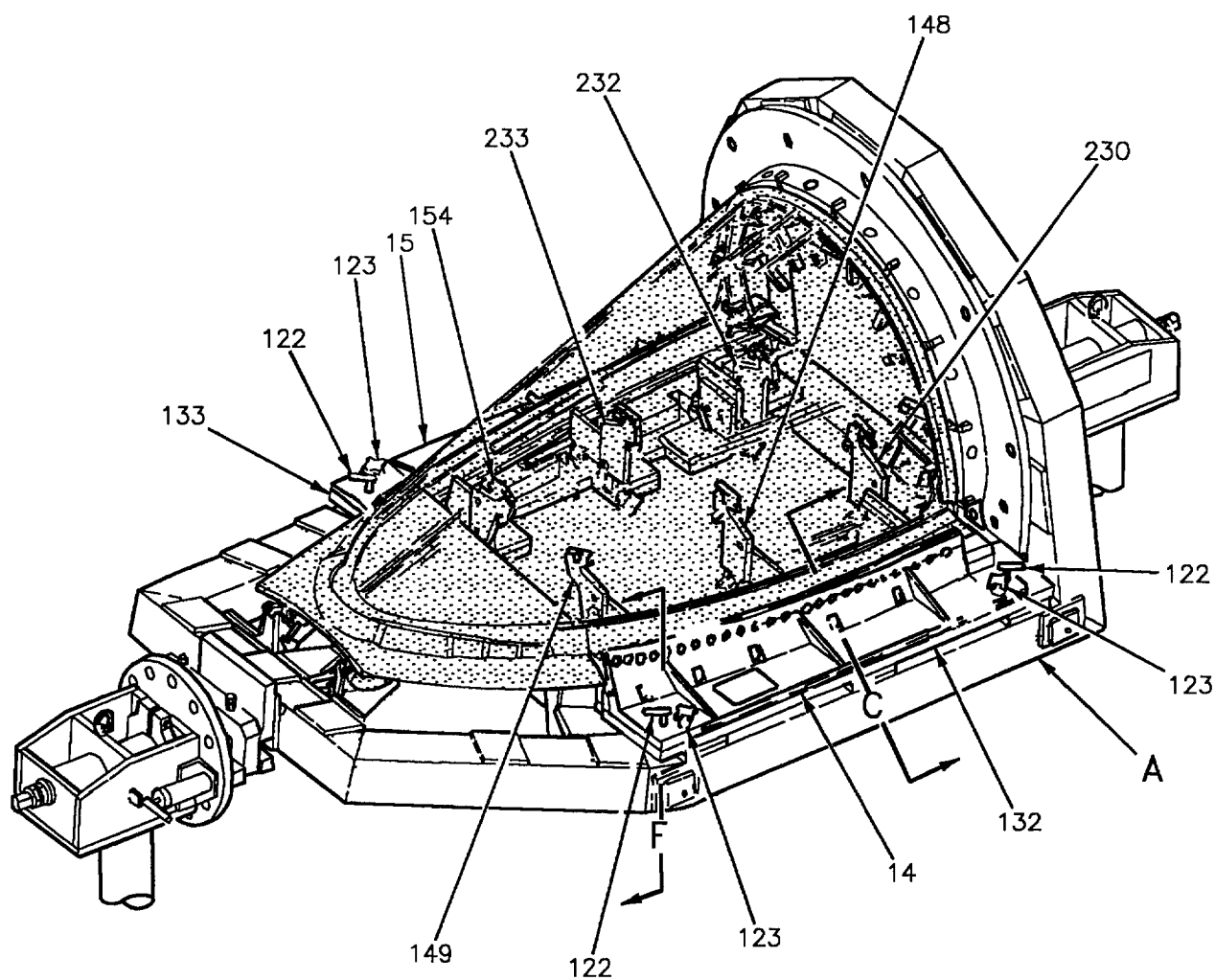


Figure 10. Inspection or Replacement - Outboard Side Frame (Sheet 1)

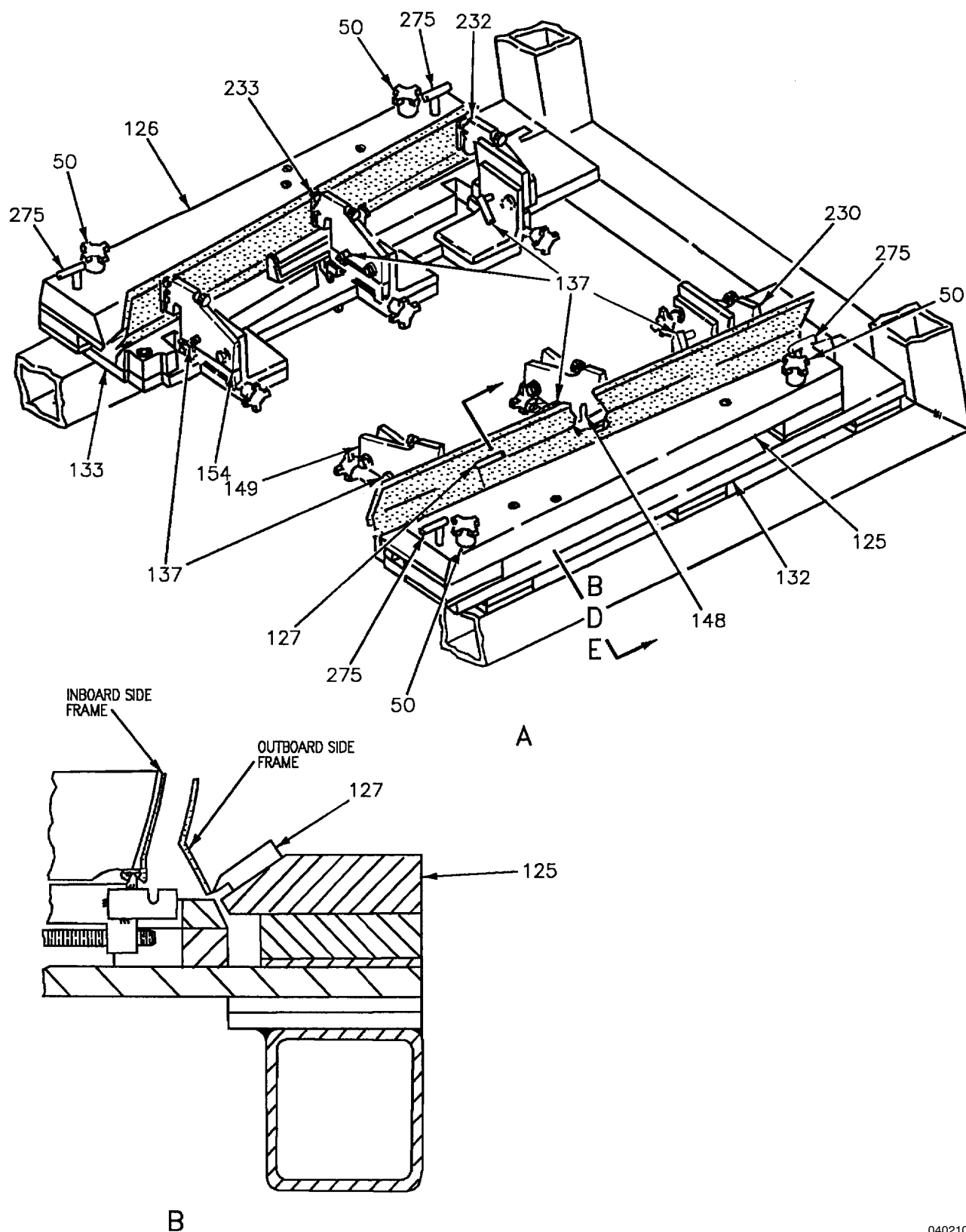


Figure 10. Inspection or Replacement - Outboard Side Frame (Sheet 2)

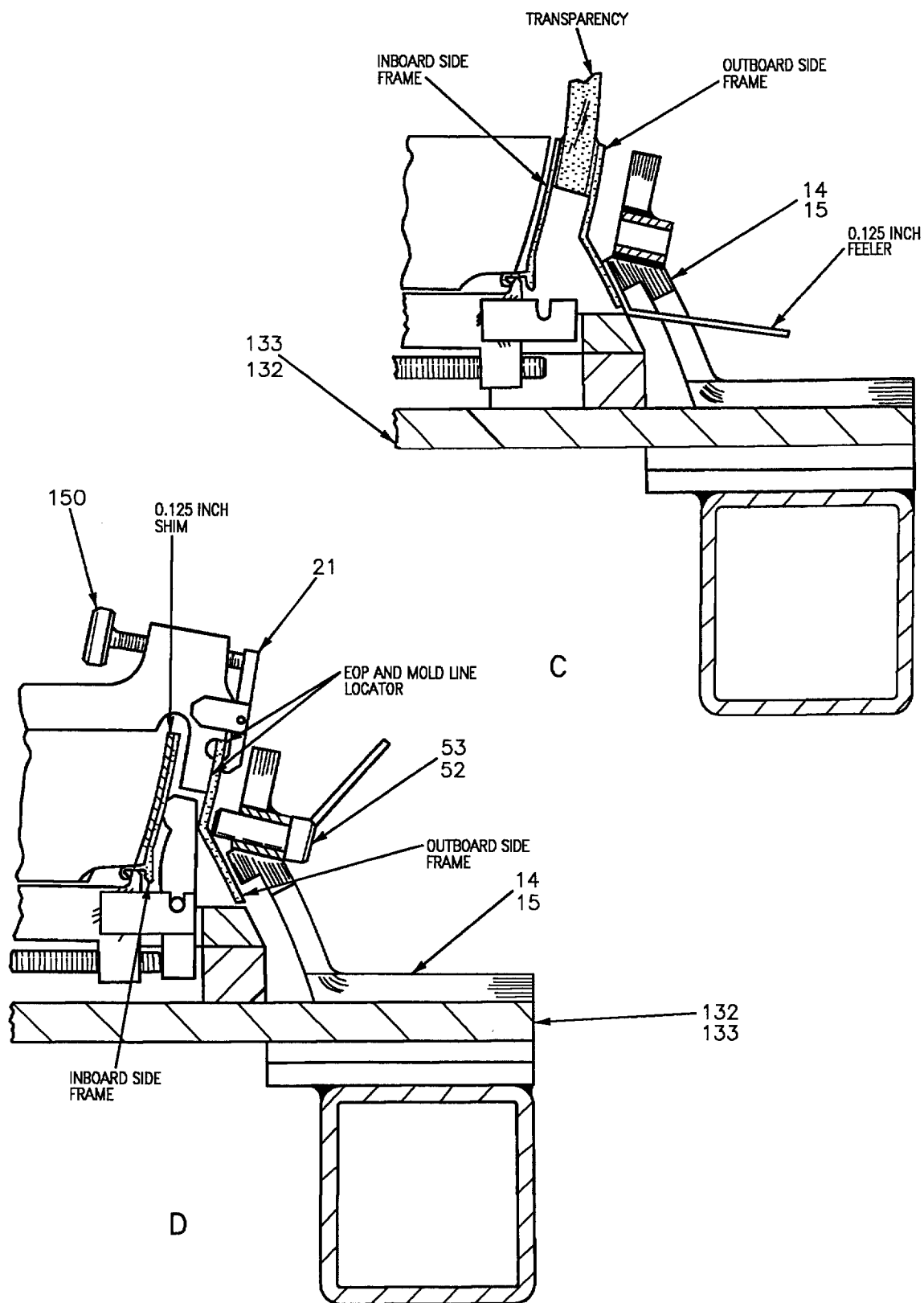
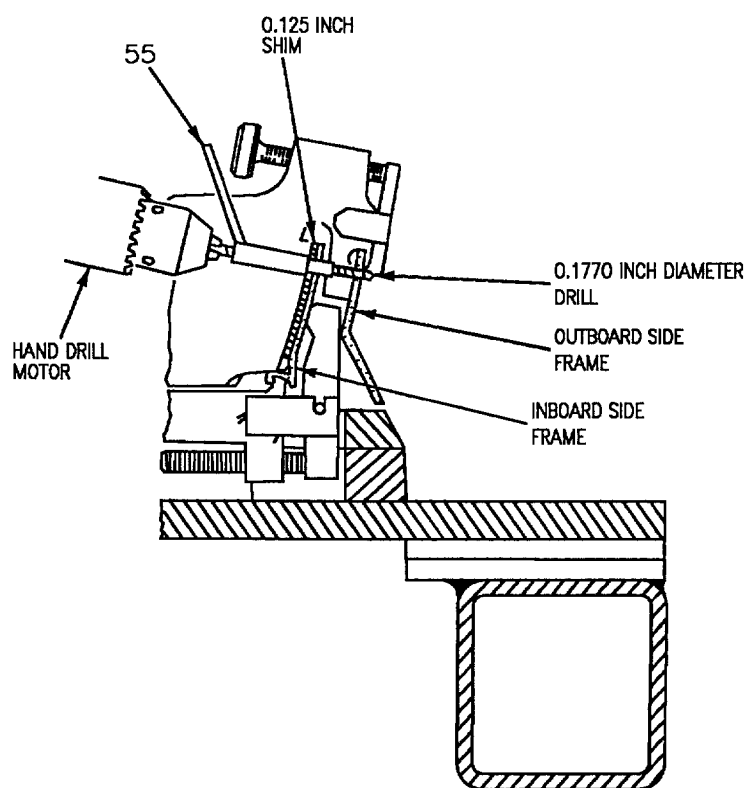
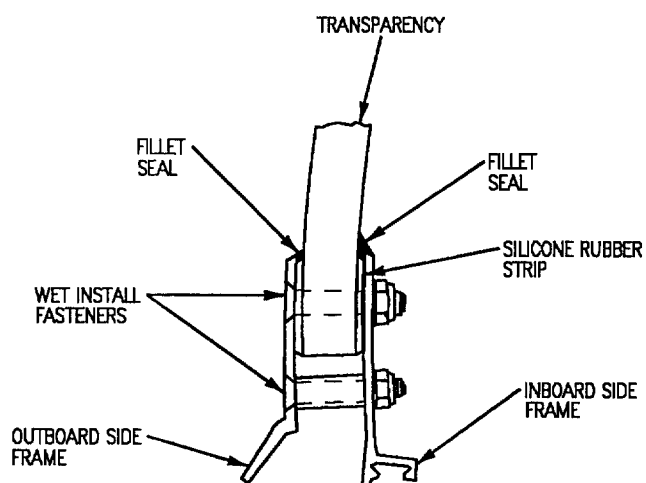


Figure 10. Inspection or Replacement - Outboard Side Frame (Sheet 3)



E



F

Figure 10. Inspection or Replacement - Outboard Side Frame (Sheet 4)

DETAIL NO.	NAME	FUNCTION
14	Drill blanket	Drills attach hole pattern for inboard and outboard side frame L/H.
15	Drill blanket	Drills attach hole pattern for inboard and outboard side frame R/H.
21	Clamp	Secures outboard side frame to locators.
50	Handknob	Secures trim bar (details 125 and 126).
52	Traveler bushing	Guides 0.196 inch diameter drill.
53	Traveler bushing	Guides 0.250 inch diameter drill.
55	Traveler bushing	Guides 0.1770 inch diameter drill.
122	L-pin	Used to locate drill blanket (details 14 and 15).
123	Handknob	Used to secure drill blanket (details 14 and 15).
125	Trim bar	Used to transfer trim to outboard side frame L/H.
126	Trim bar	Used to transfer trim to outboard side frame R/H.
127	Scribe	Scribes or checks trim on outboard side frame.
132	Base	Provides means to attach locators to fixture L/H side.
133	Base	Provides means to attach locators to fixture R/H side.
137	L-pin	Locates inboard and outboard side frame locators.
148	Locator	Provides X plane location for outboard side frame L/H.
149	Locator	Provides X plane location for outboard side frame L/H.
150	Thumbscrew	Applies clamping pressure to clamp (detail 21).
154	Locator	Provides X plane location for outboard side frame R/H.
230	Locator	Provides X plane location for outboard side frame L/H.
232	Locator	Provides X plane location for outboard side frame R/H.
233	Locator	Provides X plane location for outboard side frame R/H.
275	L-pin	Locates trim bar (details 125 and 126).

Figure 10. Inspection or Replacement - Outboard Side Frame (Sheet 5)

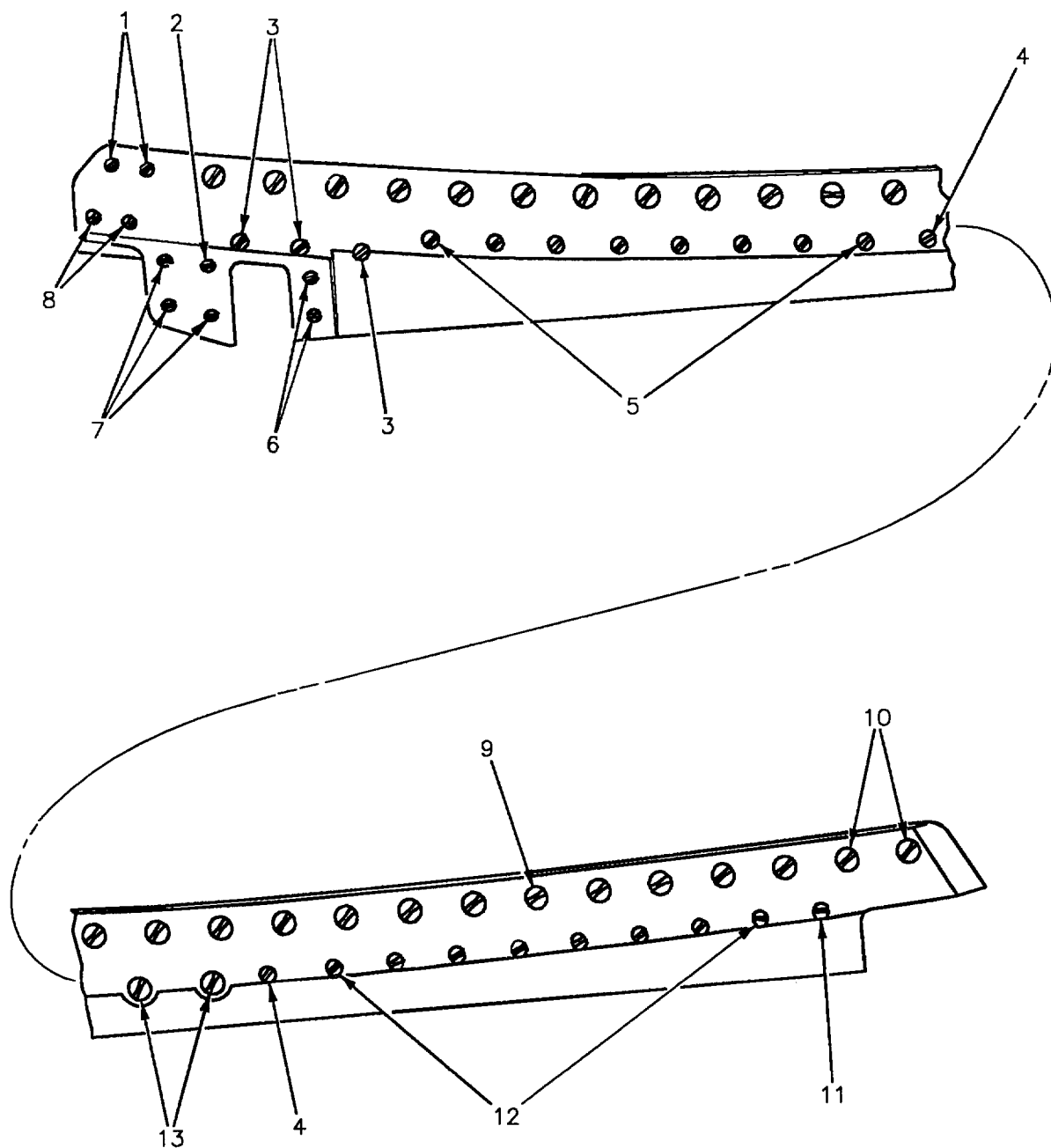


Figure 11. Outboard Side Frame Fastener Index (Sheet 1)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO.	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1		4	0.196 +0.006 -0.000	TFIM25.0204-124 6	HT4024L3-16 8	AN960C10L		NAS1291C3M
2		2	0.196 +0.006 -0.000	TFIM25.0204-124 6	HT4024L3-3 2			F50340-3-1 5
3	195 thru 197, 219 thru 221	6	0.196 +0.006 -0.000	TFIM25.0204-124 6	NAS663V16HT	AN960C10L	ST4M166- 3-0045	NAS1291C3M
4	183, 186 207, 210	4	0.196 +0.006 -0.000	TFIM25.0204-124 6	NAS663V18HT	AN960C10L	ST4M166- 3-006	NAS1291C3M
5	187 thru 194, 211 thru 218	16	0.196 +0.006 -0.000	TFIM25.0204-124 6	NAS663V16HT	AN960C10L		NAS1291C3M
6		4	0.196 +0.006 -0.000	TFIM25.0204-124 6	HT4024L3-3 2			F50340-3-1 5
7		6	0.196 +0.006 -0.000	TFIM25.0204-124 6	HT4024L3-3 2			F50339-3-1 5
8		4	0.191 +0.006 -0.000	TFIM25.0204-120 6	NAS663V15HT 2	AN960C10L		NAS1291C3M
9	25 thru 48, 79 thru 102	48	0.257 +0.006 -0.000	PILOT 9 TFIM25.0215-038 NOM 7 SPT674A350002- 5001TD 1ST OVS 7 SPT8RE174350002 2ND OVS 7 SPT9RE174350002 C'SINK 6 TFIM25.014-135	NAS664V16HT 3	AN960C416L		NAS1291C4M
10	23, 24, 103, 104	4	0.257 +0.006 -0.000	PILOT 9 TFIM25.0215-038 NOM 7 SPT674A350002- 5001TD 1ST OVS 7 SPT8RE 174350002 2ND OVS 7 SPT9RE174350002 C'SINK 6 TFIM25.014-135	NAS664V18HT 3 NAS664V24HT 3 4	AN960C416L		NAS1291C4M

Figure 11. Outboard Side Frame Fastener Index (Sheet 2)














INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO.	FASTENER 	WASHER	SPACER BUSHING	RETAINER
11	174, 198	2	0.196 +0.006 -0.000	TFIM25.0204-124 	NAS663V20HT	AN960C10L	ST4M166-3-102	NAS1291C3M
12	175 thru 182, 199 thru 206	16	0.196 +0.006 -0.000	TFIM25.0204-124 	NAS663V16HT	AN960C10L	ST4M166-3-104	NAS1291C3M
13	184, 185, 208, 209	4	0.250 +0.006 -0.000	TFIM25.0204-116 	NAS663V18HT		NAS77A4-28	
<p style="text-align: center;">LEGEND</p> <p> For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07).</p> <p> Torque fastener to 15-25 inch lbs.</p> <p> Torque fastener to 50-60 inch lbs.</p> <p> Right side only.</p> <p> For rivets attaching platenuts to structure (A1-F18AC-SRM-200, WP004 05).</p> <p> This is part of 74D110325-1001 aircraft tool kit.</p> <p> This is part of RE274350002-1 windshield repair kit.</p> <p> Torque fastener to 30-35 inch lbs.</p> <p> This is part of RE274350006-1 canopy repair kit.</p>								

Figure 11. Outboard Side Frame Fastener Index (Sheet 3)

19. **PRESSURE DECK, 74A350602, INSPECTION AND REPLACEMENT.** See figure 12.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, Windshield	RE174350002-1
Repair Kit, Canopy	RE274350006-1
Repair Kit, Windshield	RE274350002-1

Materials Required

Nomenclature	Specification or Part Number
Adhesive	RTV-106
Cheesecloth	CCC-C-440, Type 1, Class 1
Cloth, Cleaning	Rymple Cloth-301-Purified
Isopropyl Alcohol	TT-I-735, Grade B
Methyl Ethyl Ketone	TT-M-261
Primer, Adhesive	PR142
Rubber Primer	SS4004
Sealing Compound	PR-1725, B-2

20. INSPECTION.



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

- Make sure windshield is loaded correctly and secure (WP004 01).
- Remove transparency (WP004 03).
- Remove 74A350625 fairing, 74A350626 fairing support, 74A350627 deflector, 74A350628 support and 74A350630 closure.
- Locate subassembly C on base plate (detail 188) by inserting L-pins (detail 122) and secure by installing handknobs (detail 123).

e. Check gap between subassembly C and pressure deck three places for Z plane location using 0.125-inch feeler gage, views A and B.

f. Check gap between subassembly C and pressure deck two places for X plane location using 0.125-inch feeler gage, view B.

g. Check Y plane location by making sure pressure deck is positioned against button locators (detail 238) and a 0.125 inch gap exists between forward end of subassembly C and forward edge of pressure deck, views A and B.

h. Replace pressure deck if damaged or out of tolerance.

i. Remove subassembly C.

21. REPLACEMENT.

a. Remove fasteners attaching pressure deck to mating structure, see figure 13.

b. Remove pressure deck.

c. Clean all residual sealing compound from mating structure with a plastic scraper.



Methyl Ethyl Ketone

5

d. Clean mating structure with cheesecloth moistened with methyl ethyl ketone.

e. Position new pressure deck on swivel foot (detail 236), typical three places, views A and B.

f. Locate subassembly C on base plate (detail 188) by inserting L-pins (detail 122) and secure by installing handknobs (detail 123).

g. Position 0.125-inch shim between subassembly C and pressure deck three places for Z plane location, views A and B.

h. Tighten jack screws (detail 243) to secure pressured deck in Z plane location, views A and B.

i. Position 0.125-inch shim between subassembly C and pressure deck two places for X plane location, view B.

j. Tighten jack screws (detail 239) to secure pressure deck in X plane location, view B.

k. Tighten thumb screw (detail 255) to position pressure deck against button locators (detail 238) for Y plane location, views A and B.

l. Locate clamp (detail 41) by inserting L-pins (detail 220), view D.

m. Tighten thumb screw (detail 218) until contact is made on top surface of pressure deck, view D.

n. At holes 49 through 78:

(1) Temporarily install transparency (WP004 03).

(2) Insert traveler bushing (detail 54) into existing holes of transparency, view C.

(3) Mate drill 0.1285 inch pilot holes, see figure 13.

(4) Remove transparency (WP004 03).

(5) Drill pilot holes full size, see figure 13.

o. Mate drill eight 0.191 +0.006 -0.000 inch diameter holes from 74A350611 forward support fitting (6, 7, 8, figure 13).

p. Mate drill eight 0.1635 +0.0022 -0.0000 inch diameter holes from 74A350611 forward support fitting (9, figure 13).

q. Mate drill twenty 0.160 +0.004 -0.000 inch diameter holes from 74A350606 seal retainer (10, figure 13).

r. Mate drill sixteen 0.160 +0.004 -0.000 inch diameter holes from 74A350002 seal retainer (11, figure 13).

s. Mate drill eighteen 0.160 +0.004 -0.000 inch diameter holes from 74A350628 support (12, figure 13).

t. Mate drill twenty-eight 0.160 +0.004 -0.000 inch diameter holes from 74A350626 fairing support (13, 14, 15, 16, figure 13).

u. Remove subassembly C and pressure deck:

(1) Deburr and countersink fastener holes.

(2) Apply finish system to pressure deck (A1-F18AC-SRM-500, WP021 00).

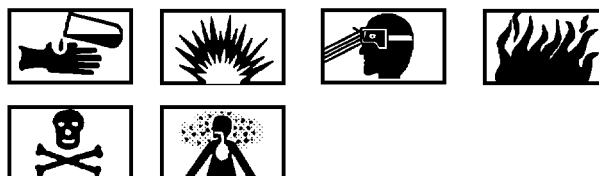


Adhesive

12

(3) Bond 74A350002 silicone rubber strips to pressure deck using adhesive, view F, G, H, J and K.

(4) Bond 74A350614 insulation block to pressure deck using adhesive, view G.



Rubber Primer

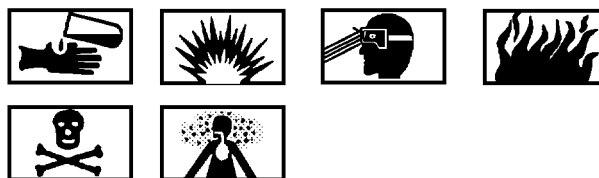
3

(5) Bond 74A350629 insulation blocks to pressure deck using rubber primer, view G.

v. Install 74A350628 support, 74A350627 deflector, 74A350626 fairing support, 74A350630 closure, and 74A350625 fairing.

w. Install transparency (WP004 03).

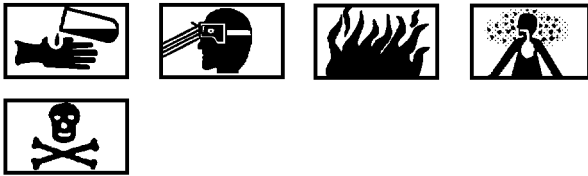
x. Seal pressure deck to transparency and mating structure, view E:



Isopropyl Alcohol

2

(1) Clean all surfaces on transparency and pressure deck receiving sealing compound with cleaning cloth moistened with isopropyl alcohol.

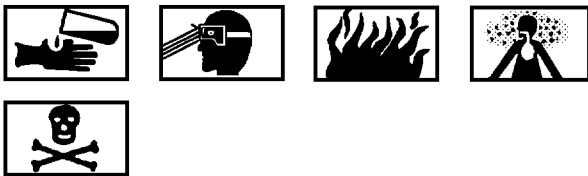


Adhesive Primer

19

(2) Brush apply one thin coat of adhesive primer to surfaces on transparency and pressure deck receiving sealing compound.

(3) Allow adhesive primer to air dry for a minimum of 15 minutes before applying sealing compound.



Sealing Compound

20

(4) Prepare sealing compound by mixing base component and accelerator to a weighed ratio of 100 parts base components to 10 parts accelerator.

(5) Thoroughly mix components until a uniform color appears.

(6) Apply sealing compound per substeps below:

(a) Fay surface seal areas indicated (A1-F18AC-SRM-200, WP011 00).

(b) Wet install fasteners. See figure 13 and (A1-F18AC-SRM-200, WP011 00).

(c) Fillet seal areas indicated (A1-F18AC-SRM-200, WP011 00).

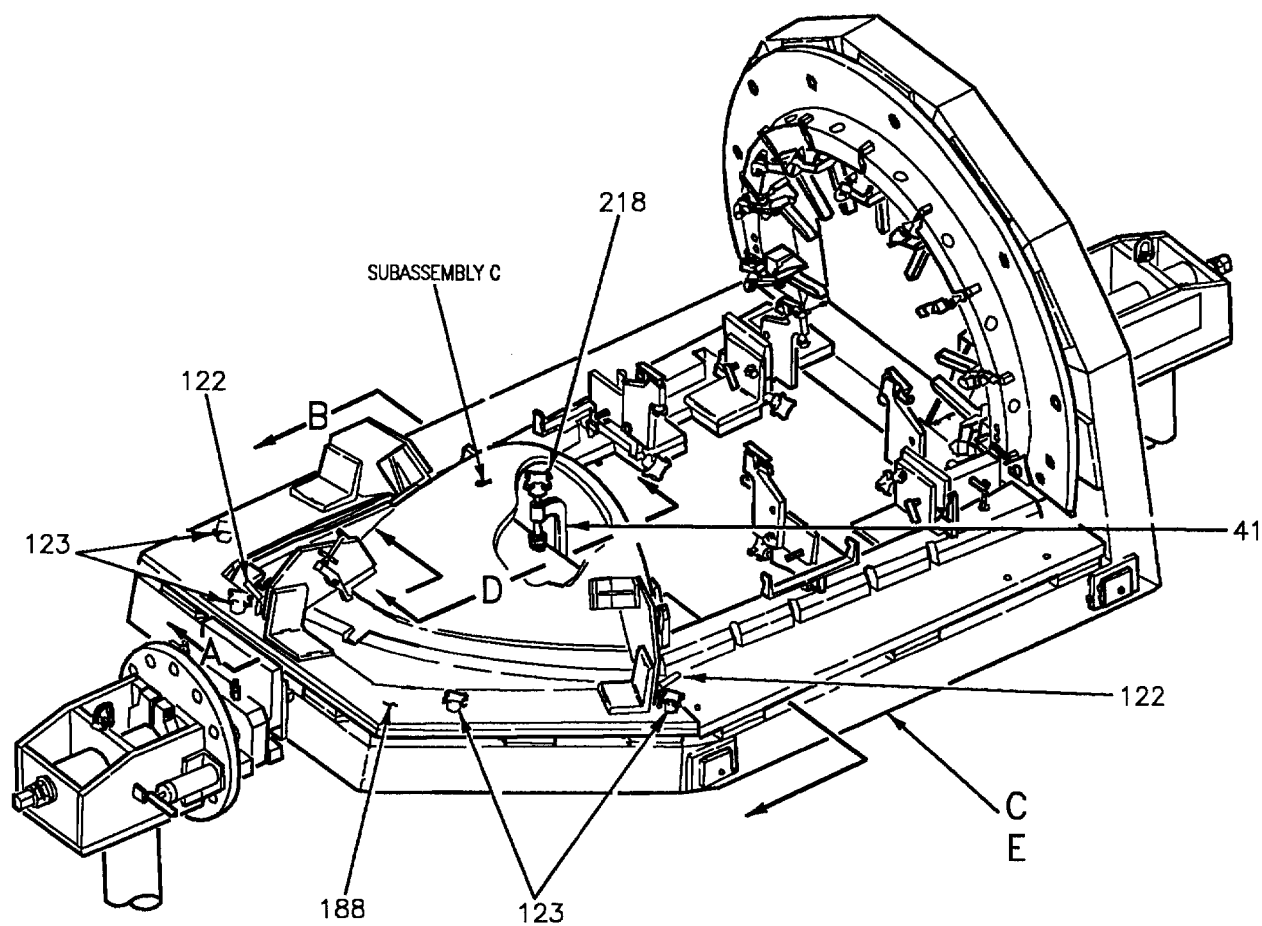


Figure 12. Inspection or Replacement - Pressure Deck (Sheet 1)

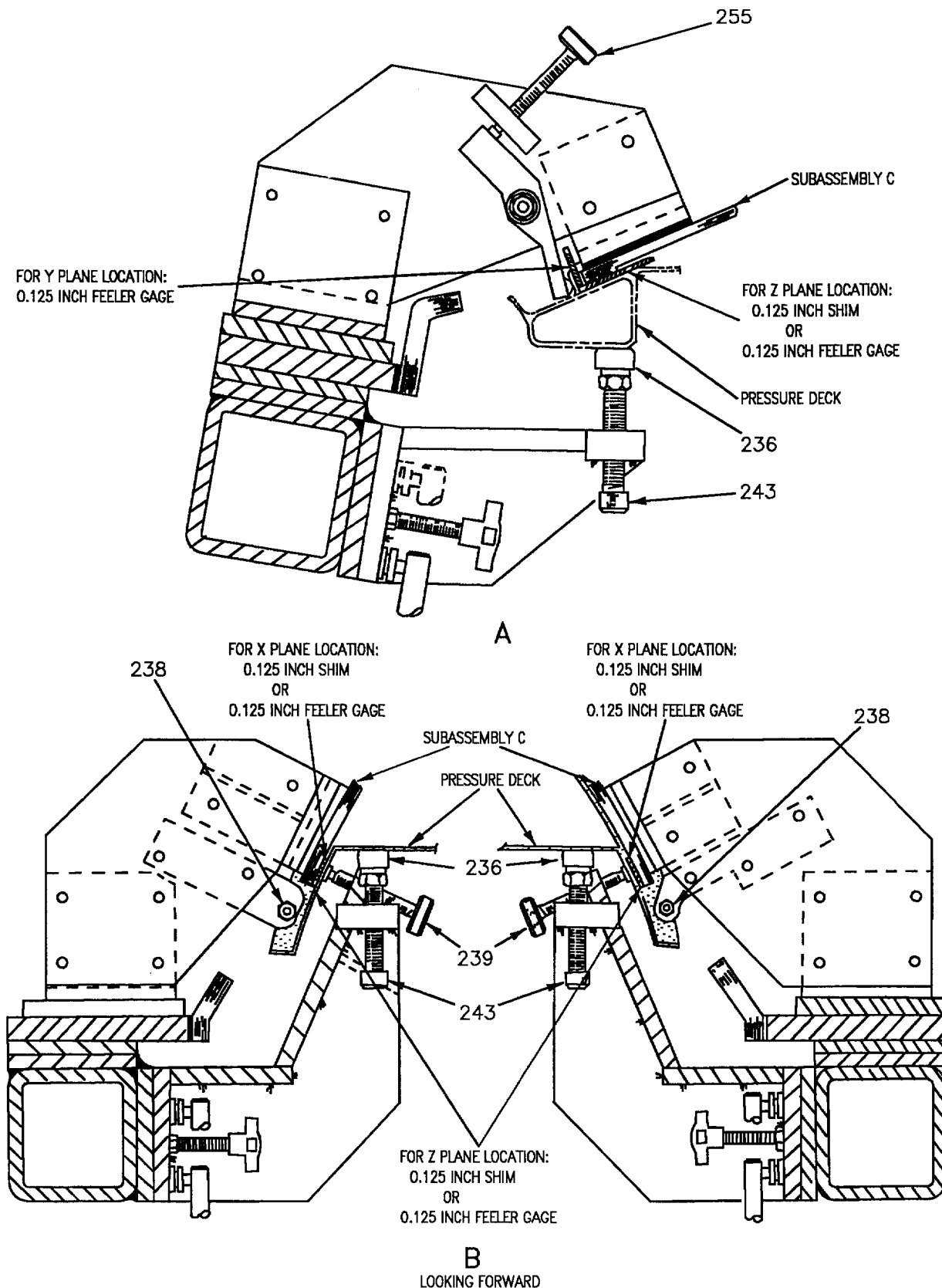


Figure 12. Inspection or Replacement - Pressure Deck (Sheet 2)

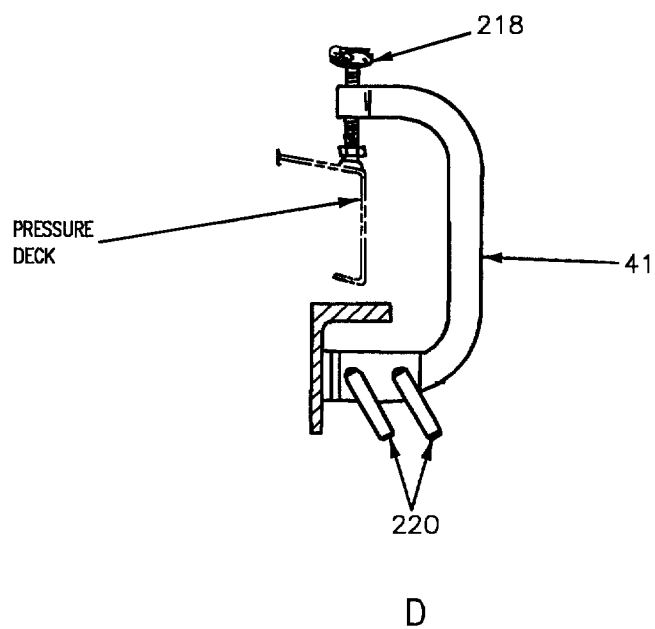
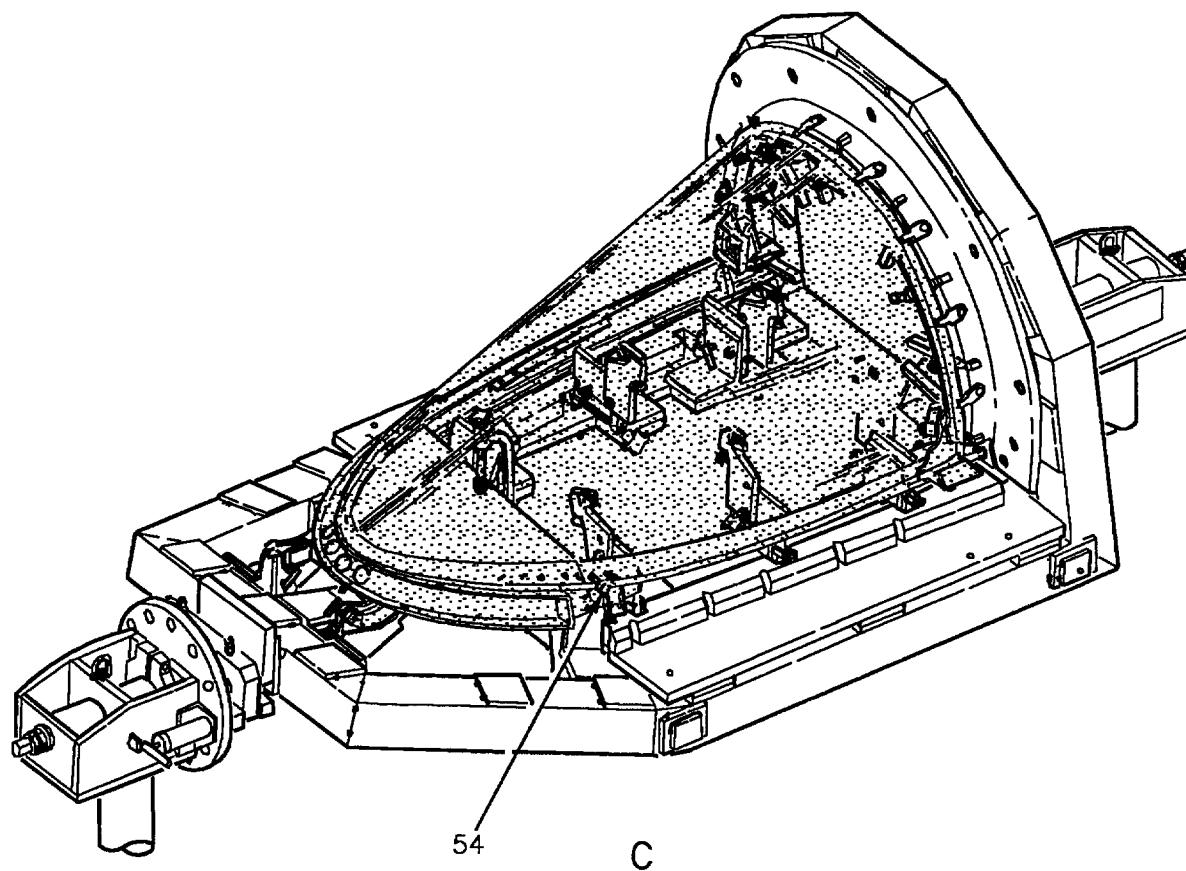


Figure 12. Inspection or Replacement - Pressure Deck (Sheet 3)

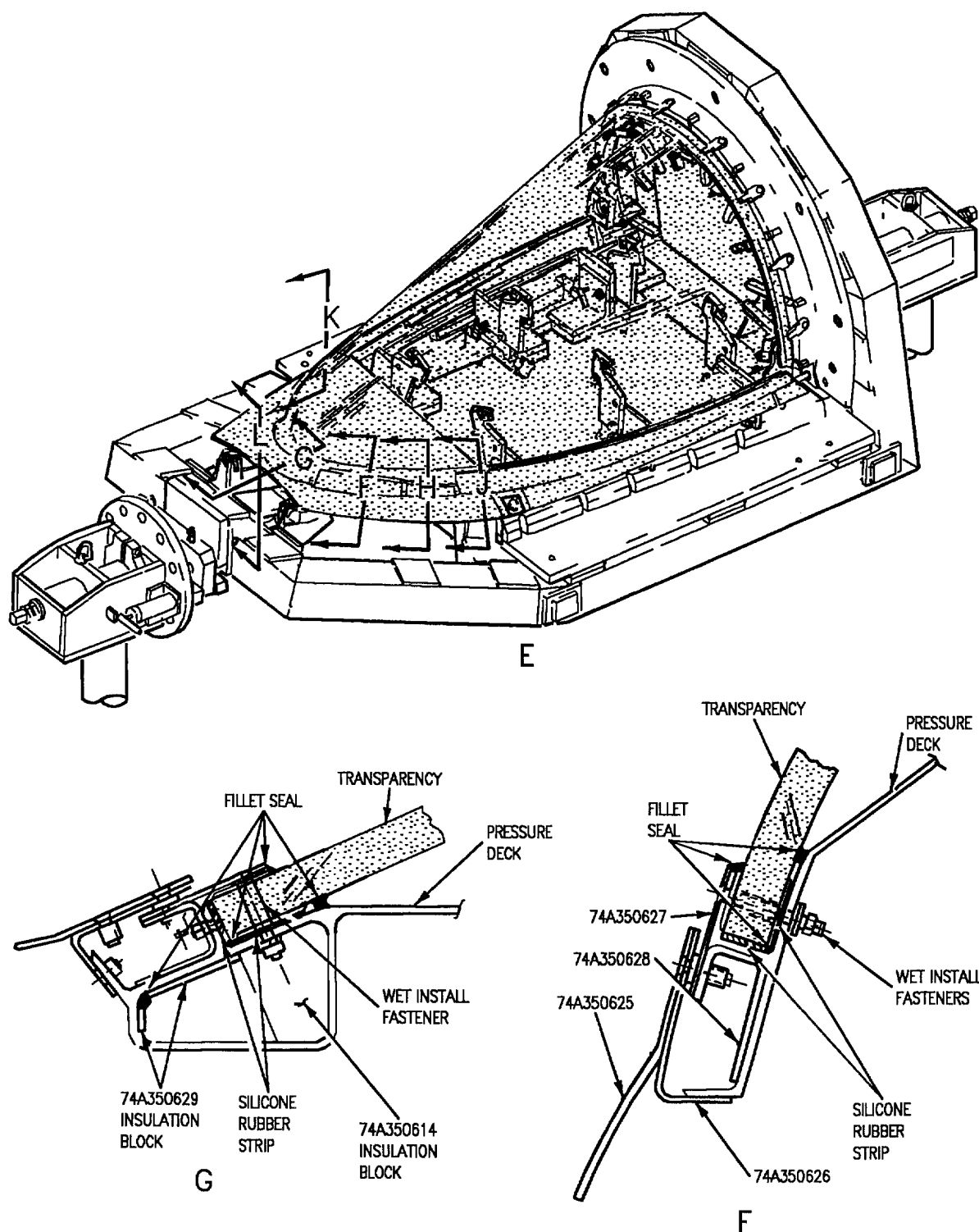


Figure 12. Inspection or Replacement - Pressure Deck (Sheet 4)

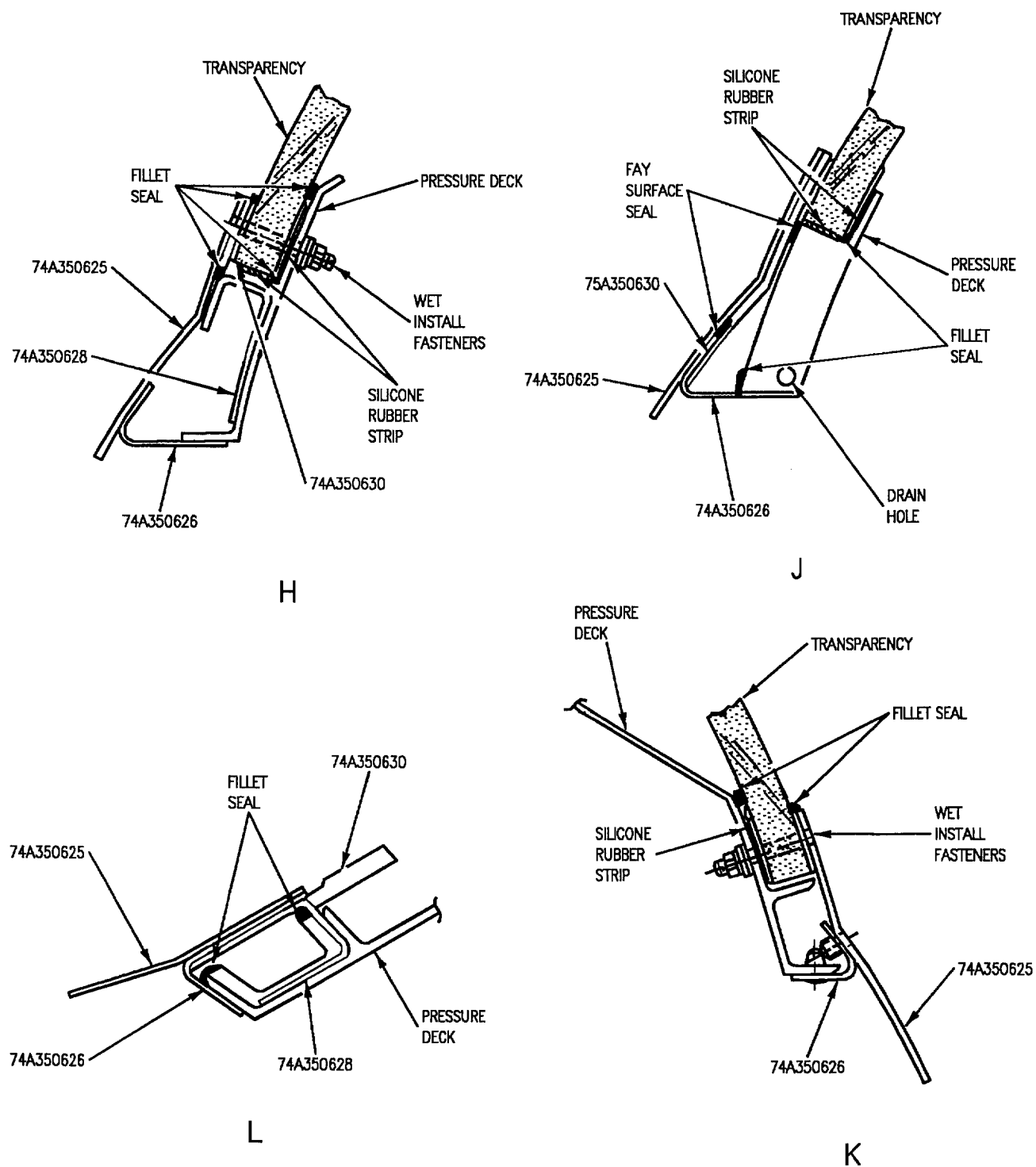


Figure 12. Inspection or Replacement - Pressure Deck (Sheet 5)

DETAIL NO.	NAME	FUNCTION
Subassembly C	Locator	Locates pressure deck.
41	Clamp	Secures pressure deck to swivel foot (detail 236).
54	Traveler bushing	Guides 0.1285 inch diameter drill.
122	L-pin	Locates subassembly C on fixture.
123	Handknob	Secures subassembly C on fixture.
188	Base plate	Provides means to attach subassembly C to fixture.
218	Thumb screw	Used to apply clamping pressure to pressure deck.
220	L-pin	Locates clamp (detail 41) into position.
236	Swivel foot	Provides Z plane location for pressure deck.
238	Button locator	Provides Y plane location for pressure deck.
239	Jack screw	Clamps pressure deck against subassembly C.
243	Jack screw	Clamps pressure deck against subassembly C.
255	Thumb screw	Clamps pressure deck against button locator (detail 238).

Figure 12. Inspection or Replacement - Pressure Deck (Sheet 6)

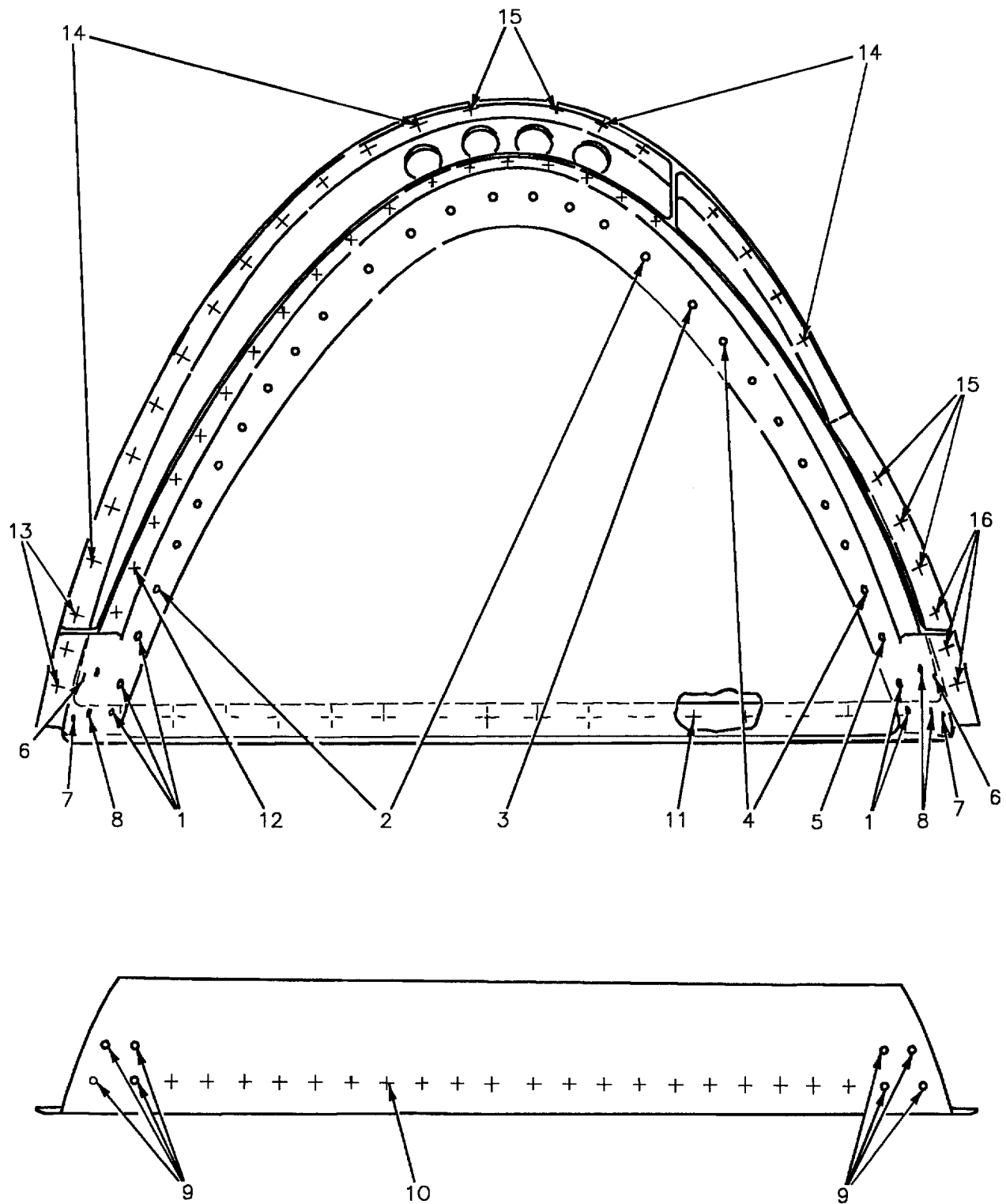


Figure 13. Pressure Deck Fastener Index (Sheet 1)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO.	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1	49 thru 51, 77, 78	5	0.196 +0.006 -0.000	PILOT 9 TFIM25.0215-004 NOM 7 SPT274A350004-5001TD 1ST OVS 7 SPT6RE174350004 2ND OVS 7 SPT7RE174350004 C'SINK 6 TFIM25.014-104	HT4024L3-16 2	AN960C10L		NAS1291C3M
2	52 thru 67	16	0.196 +0.006 -0.000	PILOT 9 TFIM25.0215-004 NOM 7 SPT274A350004-5001TD 1ST OVS 7 SPT6RE174350004 2ND OVS 7 SPT7RE174350004 C'SINK 6 TFIM25.014-104	NAS663V14HT 3	AN960C10L 4		NAS1291C3M
3	68	1	0.196 +0.006 -0.000	PILOT 9 TFIM25.0215-004 NOM 7 SPT274A350004-5001TD 1ST OVS 7 SPT6RE174350004 2ND OVS 7 SPT7RE174350004 C'SINK 6 TFIM25.014-104	HT4024L3-20 2	AN960C10L 4		NAS1291C3M
4	69 thru 75	7	0.196 +0.006 -0.000	PILOT 9 TFIM25.0215-004 NOM 7 SPT274A350004-5001TD 1ST OVS 7 SPT6RE174350004 2ND OVS 7 SPT7RE174350004 C'SINK 6 TFIM25.014-104	HT4024L3-16 2	AN960C10L 4		NAS1291C3M

Figure 13. Pressure Deck Fastener Index (Sheet 2)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO.	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
5	76	1	0.196 +0.006 -0.000	PILOT 9 TFIM25.0215-004 NOM 7 SPT274A350004-5001TD 1ST OVS 7 SPT6RE174350004 2ND OVS 7 SPT7RE174350004 C'SINK 6 TFIM25.014-104	HT4024L3-16 2	AN960C10L	NAS42DD6-7	NAS1291C3M
6		2	0.191 +0.006 -0.000	TFIM25.0204-120 6	NAS673V5 3	AN960C10L 5		NAS1291C3M
7		2	0.191 +0.006 -0.000	TFIM25.0204-120 6	NAS673V7 3	AN960C10L	ST4M130-03004 8	NAS1291C3M
8		4	0.191 +0.006 -0.000	TFIM25.0204-120 6	NAS663V15HT 3	AN960C10L		NAS1291C3M
9		8	0.1635 +0.0022 -0.000		HLT310DL-5-10			HL570-5MC
10		20	0.160 +0.004 -0.000		NAS1398B5A4			
11		16	0.160 +0.004 -0.000		NAS1398B5A3			
12		18	0.160 +0.004 -0.000		NAS1399C5A3	4M27-5		
13		3	0.160 +0.004 -0.000		NAS1398B5A4			
14		17	0.160 +0.004 -0.000		NAS1398B5A3			
15		5	0.160 +0.004 -0.000		NAS1399B5A3			
16		3	0.160 +0.004 -0.000		NAS1399B5A5			

LEGEND

- 1 For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07).
- 2 Torque fastener to 30-35 inch lbs.
- 3 Torque fastener to 15-25 inch lbs.
- 4 Two washers required for each fastener.
- 5 Two washers required, one under fastener head.
- 6 This is part of 74D110325-1001 aircraft tool kit.
- 7 This is part of RE274350002-1 windshield repair kit.
- 8 Install under fastener head.
- 9 This is part of RE274350006-1 canopy repair kit.

Figure 13. Pressure Deck Fastener Index (Sheet 3)

22. **SEAL RETAINER, 74A350606, INSPECTION AND REPLACEMENT.** See figure 14.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, Windshield	RE174350002-1

Materials Required

Nomenclature	Specification or Part Number
Cheesecloth	CCC-C-440, Type 1, Class 1
Cloth, Cleaning	Rymple Cloth-301-Purified
Isopropyl Alcohol	TT-I-735, Grade B
Methyl Ethyl Ketone	TT-M-261
Rivet (20)	NAS1398B5A4
Sealing Compound	PR-1725, B-2

23. INSPECTION.



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

a. Make sure windshield is loaded correctly and secure (WP004 01).

NOTE

To check Z plane location of seal retainer, windshield must be resting on forward and aft support fittings, pinned into forward hinges and clamped to arch.

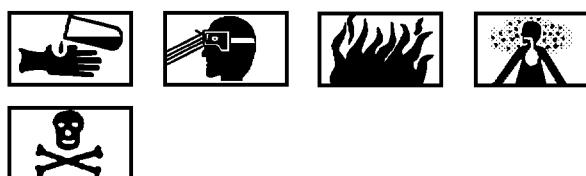
b. Check Z plane location of seal retainer by extending locator (detail 34) and secure with L-pins (detail 137), typical three places, view C.

c. Replace seal retainer if locator (detail 34) cannot be secured in place with L-pins (detail 137) or gap exists between locators (detail 34) and seal retainer.

24. REPLACEMENT.

a. Drill out rivets holding damaged seal retainer to 74A350602 pressure deck.

b. Clean all residual sealing compound from pressure deck using sealant scraper.



Methyl Ethyl Ketone

5

c. Clean mating structure with clean cheesecloth moistened with methyl ethyl ketone.

d. Extend locator (detail 34) and secure with L-pins (detail 137), view C.

e. Position seal retainer on fingers of locator (detail 34) and locate against aft face of 74A350602 pressure deck for Y plane location, view C.

f. Align L/H EOP of seal retainer flush with L/H face of locator (detail 34) for X plane location, view D.

g. Rotate clamp (detail 36) over seal retainer and tighten knurled nut (detail 195) to secure seal retainer in Z plane location, view B.

h. Mate drill twenty 0.160 +0.004 -0.000 inch diameter holes from 74A350602 pressure deck.

i. Deburr and apply finish system to seal retainer (A1-F18AC-SRM-500, WP021 00).

j. Install seal retainer using NAS1398B5A4 rivets 20 places (A1-F18AC-SRM-200, WP004 06).

k. Apply sealing compound to seal retainer:



Isopropyl Alcohol

2

(1) Clean surfaces receiving sealing compound with cleaning cloth moistened with isopropyl alcohol.



Sealing Compound

20

(2) Prepare sealing compound by mixing base component and accelerator to a weighed ratio of 100 parts base component to 10 parts accelerator.

(3) Thoroughly mix components until a uniform color appears.

(4) Butt gap seal area indicated on view E (A1-F18AC-SRM-200, WP011 00).

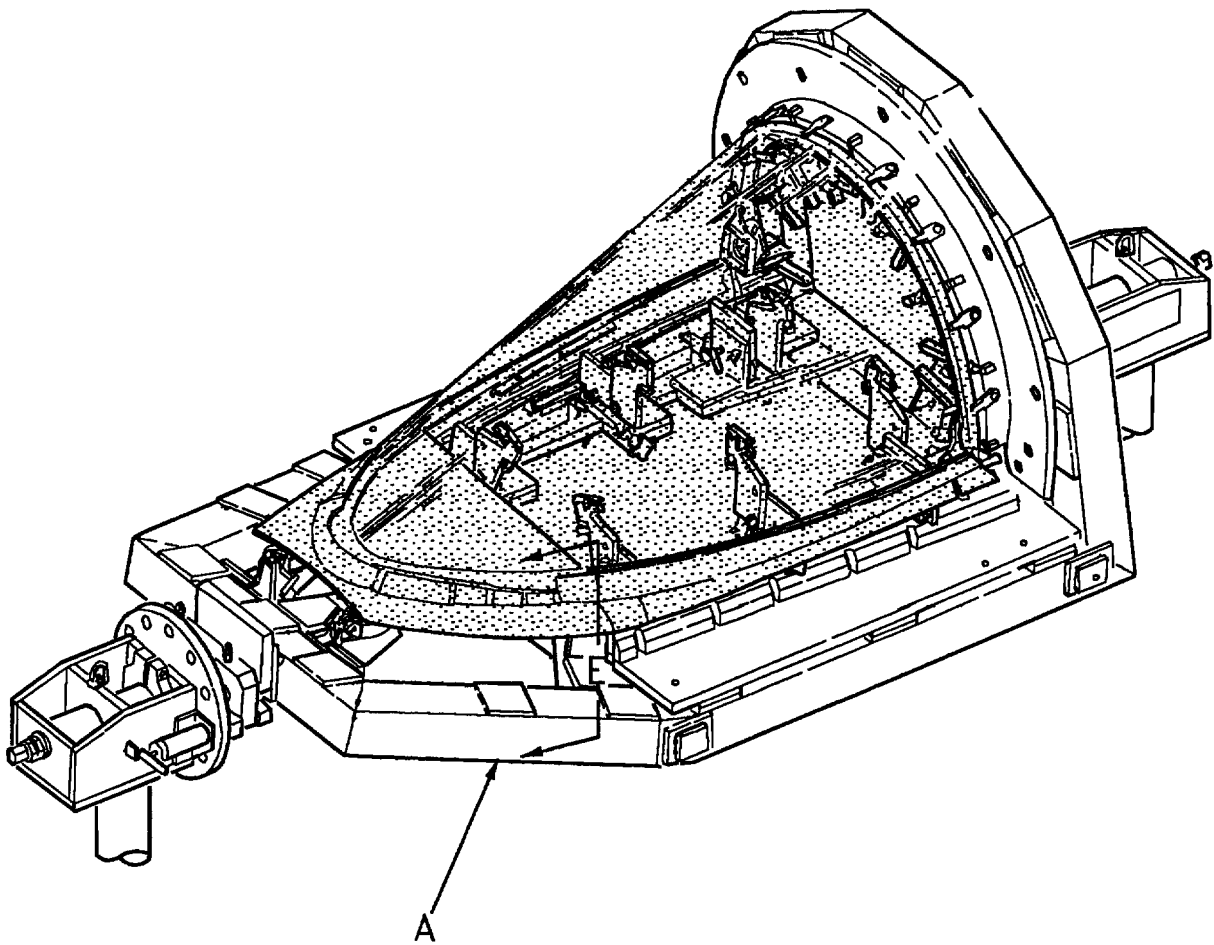


Figure 14. Inspection or Replacement - Seal Retainer (Sheet 1)

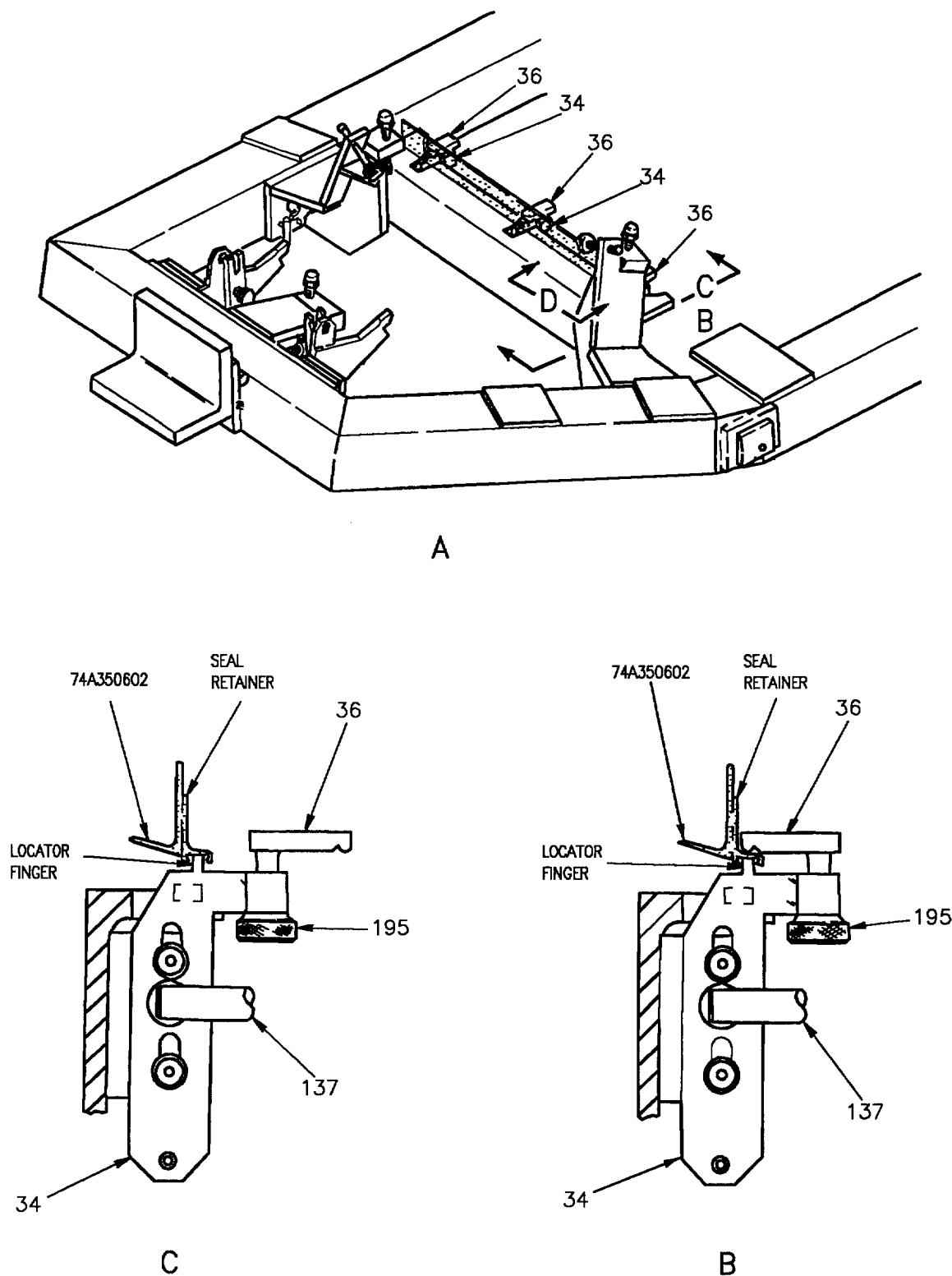


Figure 14. Inspection or Replacement - Seal Retainer (Sheet 2)

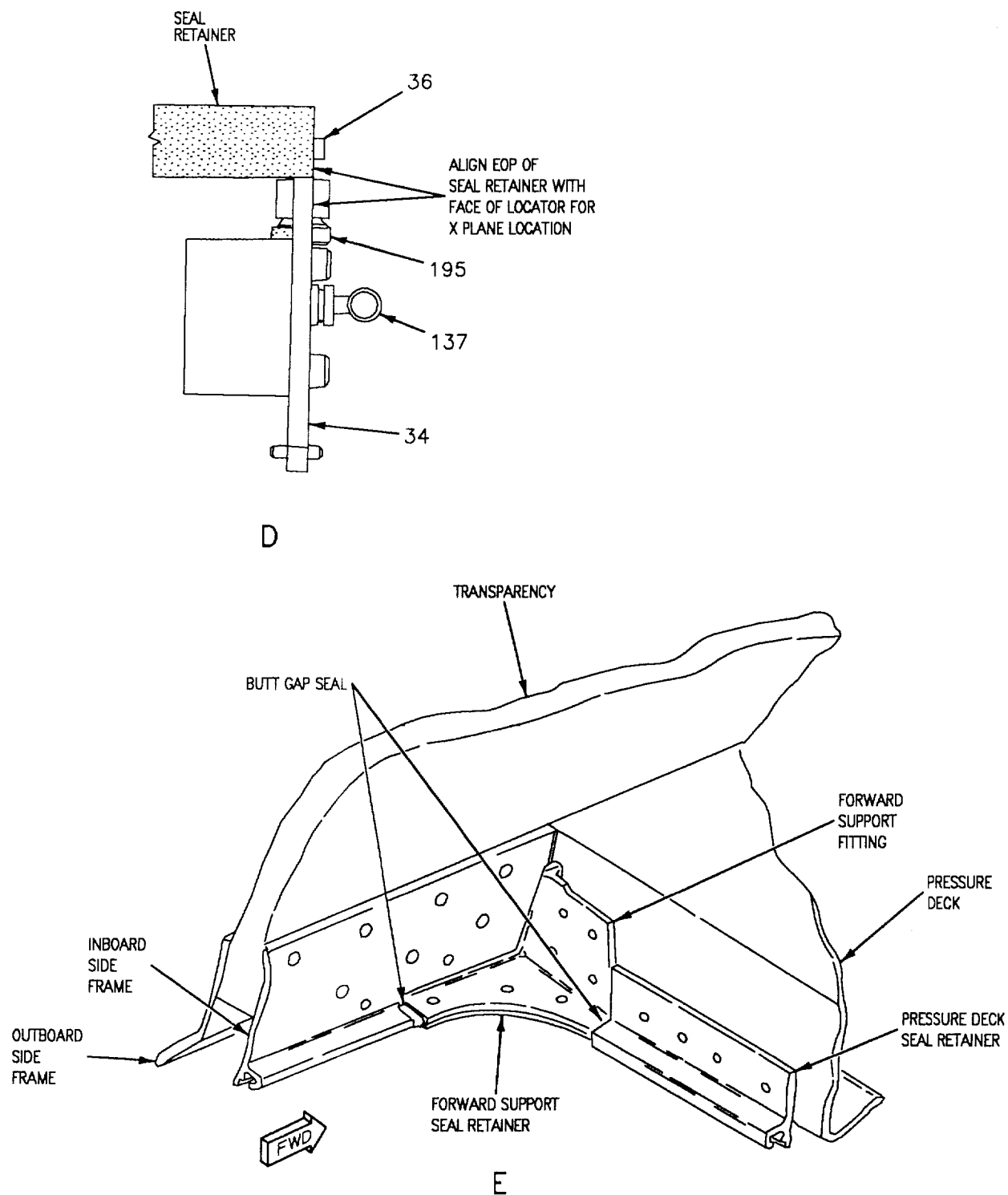


Figure 14. Inspection or Replacement - Seal Retainer (Sheet 3)

DETAIL NO.	NAME	FUNCTION
34	Locator	Provides X, Y, and Z plane location.
36	Clamp	Secures seal retainer to locator (detail 34).
137	L-pin	Locates locator (detail 34).
195	Knurled nut	Provides clamping pressure to clamp (detail 36).

Figure 14. Inspection or Replacement - Seal Retainer (Sheet 4)

25. **FORWARD FAIRING, 74A350625, INSPECTION AND REPLACEMENT.** See figure 15.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, Windshield	RE174350002-1
Repair Kit, Canopy	RE274350006-1
Repair Kit, Windshield	RE274350002-1

Materials Required

Nomenclature	Specification or Part Number
Cheesecloth	CCC-C-440, Type 1, Class 1
Cloth, Cleaning	Rymple Cloth-301-Purified
Isopropyl Alcohol	TT-I-735, Grade B
Methyl Ethyl Ketone	TT-M-261
Primer, Adhesive	PR142
Sealing Compound	PR-1725, B-2

26. INSPECTION.



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

- Make sure windshield is loaded correctly and secure (WP004 01).
- Locate forward fairing mold line locator (detail 32) on base plate (detail 188), view B.
- Visually check mold line surface of forward fairing to be in alignment with mold line surface of forward fairing mold line locator (detail 32), view D.
- Replace forward fairing if damaged or out of alignment.

27. REPLACEMENT.

- Remove fasteners attaching forward fairing to transparency and mating structure, figure 16.
- Remove transparency (WP004 03).
- Clean all residual sealing compound or adhesive from mating structure using sealant scraper.



Methyl Ethyl Ketone

5

- Clean mating structure with cheesecloth moistened with methyl ethyl ketone.
- Position new forward fairing on existing structure.
- Locate drill blanket (detail 31) on base plate (detail 188) by inserting L-pins (detail 122) and secure by installing handknobs (detail 123).
- Position 0.125 inch shim 11 places between outer surface of forward fairing and inner surface of drill blanket (detail 31) for Z plane location, views A and C.
- Position upper EOP of forward fairing against pin locators (detail 191 L/H and 186 R/H) for X plane location, view A.
- Slide forward fairing aft until contact is made with drill bushing (detail 189) for Y plane location.
- Secure forward fairing to drill blanket (detail 31) using C-clamps.
- At hole location 126 through 173:
 - Install traveler bushing (detail 59), view C.
 - Drill 0.195 +0.007 -0.000 inch diameter holes, figure 16.
 - Countersink fastener holes.

l. At holes 49 through 51 and 68 through 78:

(1) Install traveler bushing (detail 54) into existing holes of 74A350602 pressure deck.

(2) Back drill 0.1285 inch diameter pilot hole.

(3) Drill pilot holes full size, see figure 16.

(4) Countersink fastener holes.

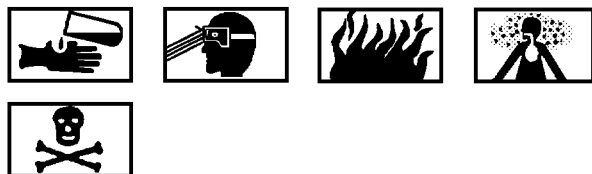
m. Remove drill blanket (detail 31), C-clamps, and forward fairing.

n. Deburr and apply finish system to forward fairing (A1-F18AC-SRM-500, WP021 00).

o. Install forward fairing.

p. Install transparency (WP004 03).

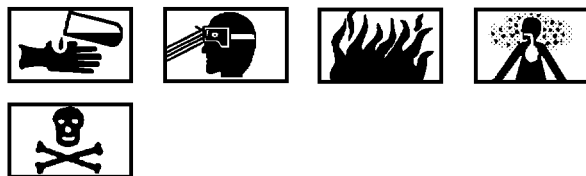
q. Seal forward fairing to transparency and mating structure, view E.



Isopropyl Alcohol

2

(1) Clean all surfaces on transparency and forward fairing receiving sealing compound with cleaning cloth moistened with isopropyl alcohol.

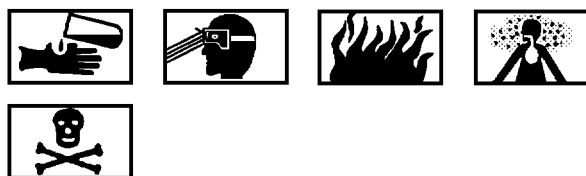


Adhesive Primer

19

(2) Brush apply one thin coat of adhesive primer to surfaces on transparency and forward fairing receiving sealing compound.

(3) Allow adhesive primer to air dry for a minimum of 15 minutes before applying sealing compound.



Sealing Compound

20

(4) Prepare sealing compound by mixing base component and accelerator to a weighed ratio of 100 parts base component to 10 parts accelerator.

(5) Thoroughly mix components until a uniform color appears.

(6) Apply sealing compound per substeps below:

(a) Fay surface seal areas indicated (A1-F18AC-SRM-200, WP011 00).

(b) Wet install fasteners. See figure 16 and (A1-F18AC-SRM-200, WP011 00).

(c) Fillet seal areas indicated (A1-F18AC-SRM-200, WP011 00).

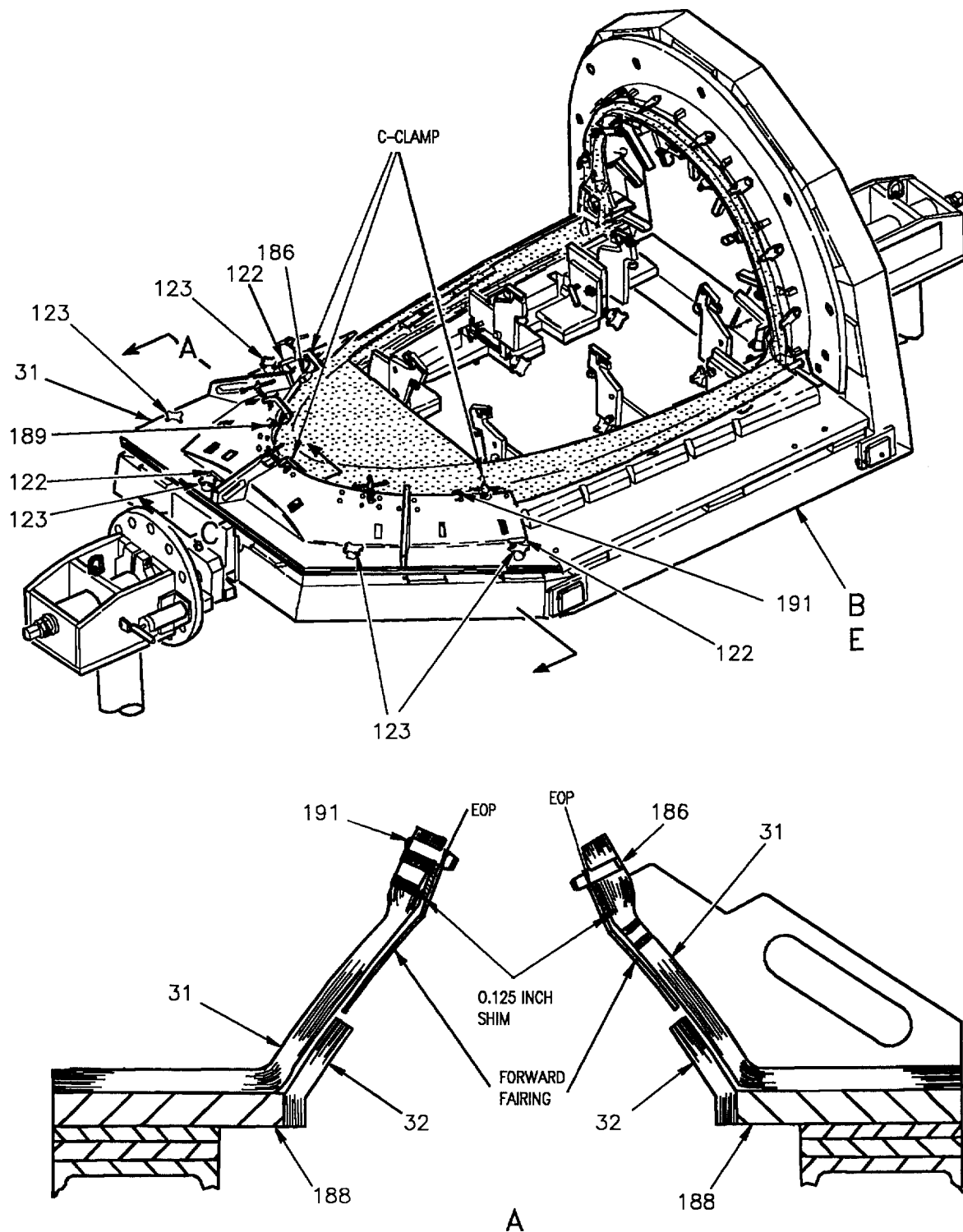


Figure 15. Inspection or Replacement - Forward Fairing (Sheet 1)

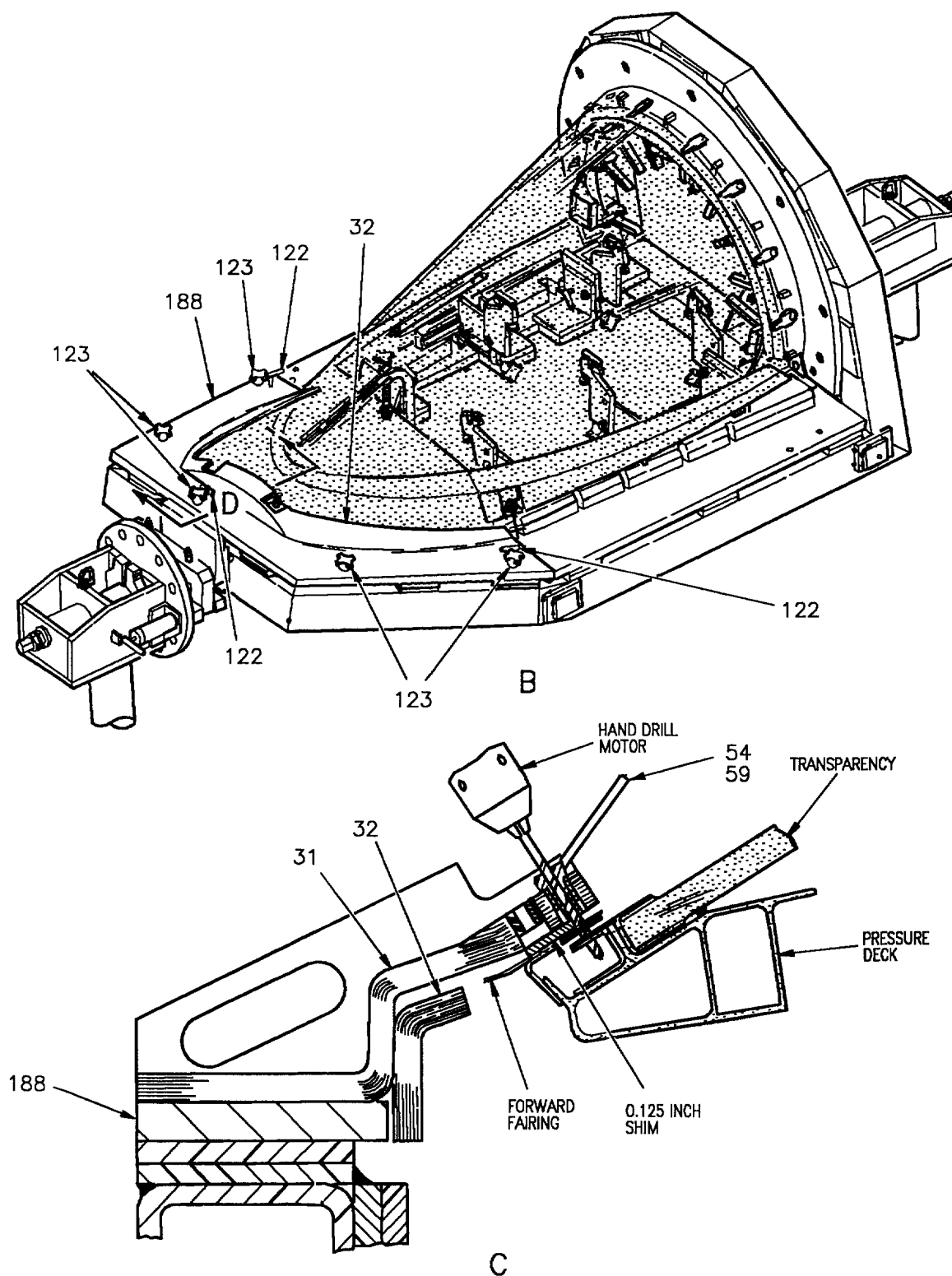


Figure 15. Inspection or Replacement - Forward Fairing (Sheet 2)

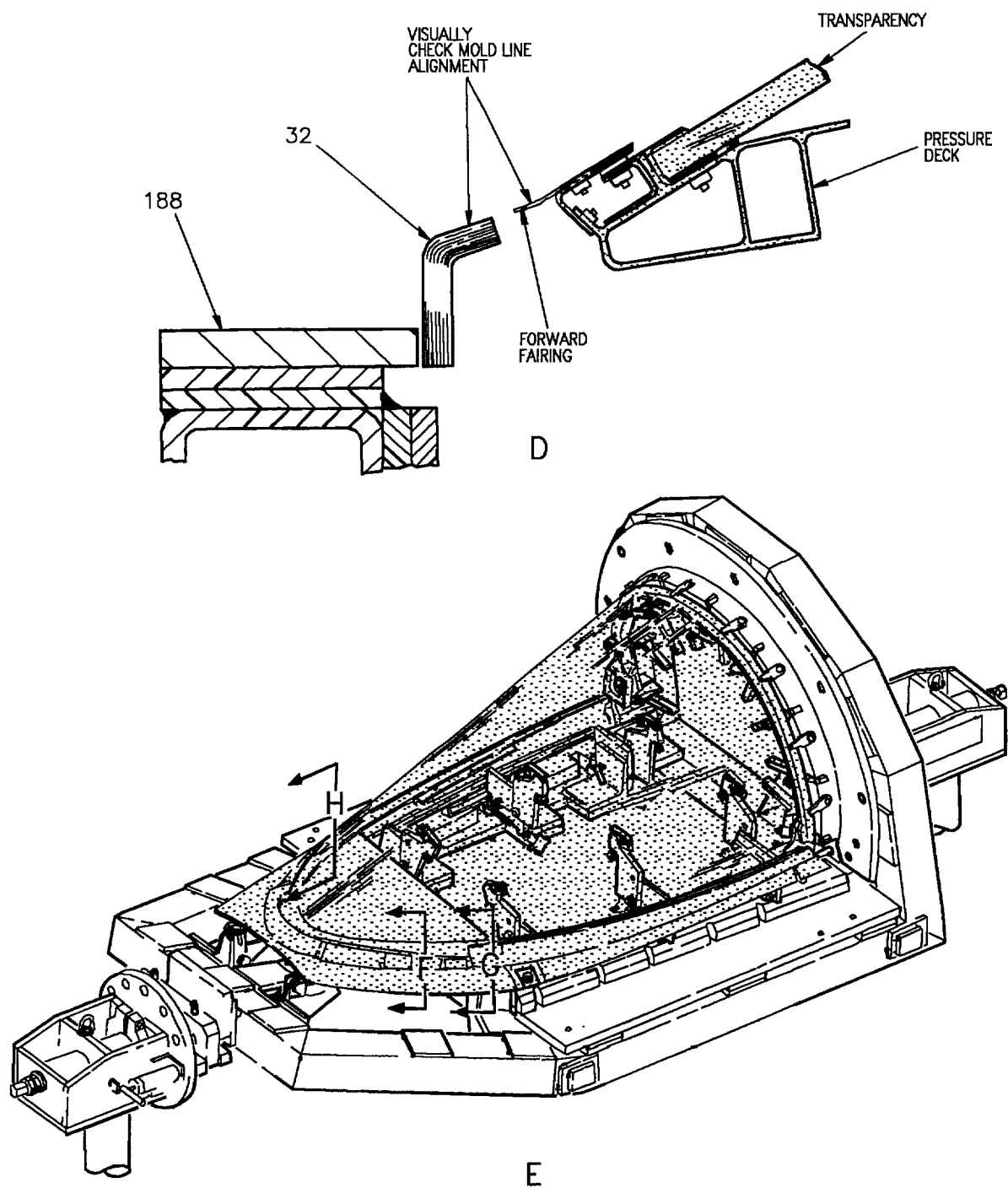


Figure 15. Inspection or Replacement - Forward Fairing (Sheet 3)

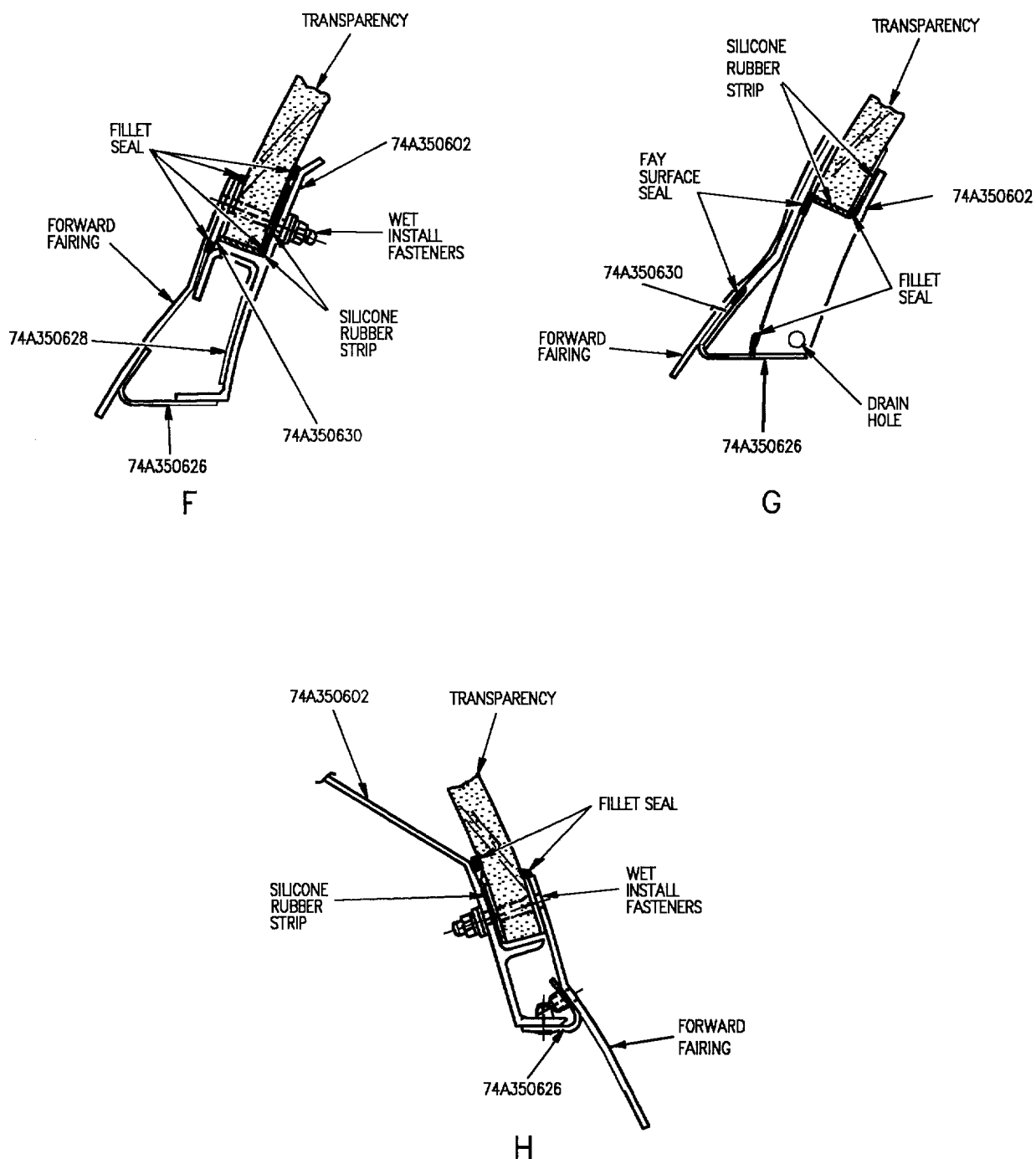


Figure 15. Inspection or Replacement - Forward Fairing (Sheet 4)

DETAIL NO.	NAME	FUNCTION
31	Drill blanket	Provides attach hole pattern for forward fairing.
32	Mold line locator	Simulates fuselage mold line.
54	Traveler bushing	Guides 0.1285 inch drill.
59	Traveler bushing	Guides 0.195 inch drill.
122	L-pin	Locates drill blanket (detail 31).
123	Handknob	Secures drill blanket (detail 31) to fixture.
186	Pin locators	Locates X plane location, R/H.
188	Base plate	Base plate to which mold line locator (detail 32) is secured.
189	Drill Bushing	Locates Y plane location.
191	Pin locators	Locates X plane location, L/H.

Figure 15. Inspection or Replacement - Forward Fairing (Sheet 5)

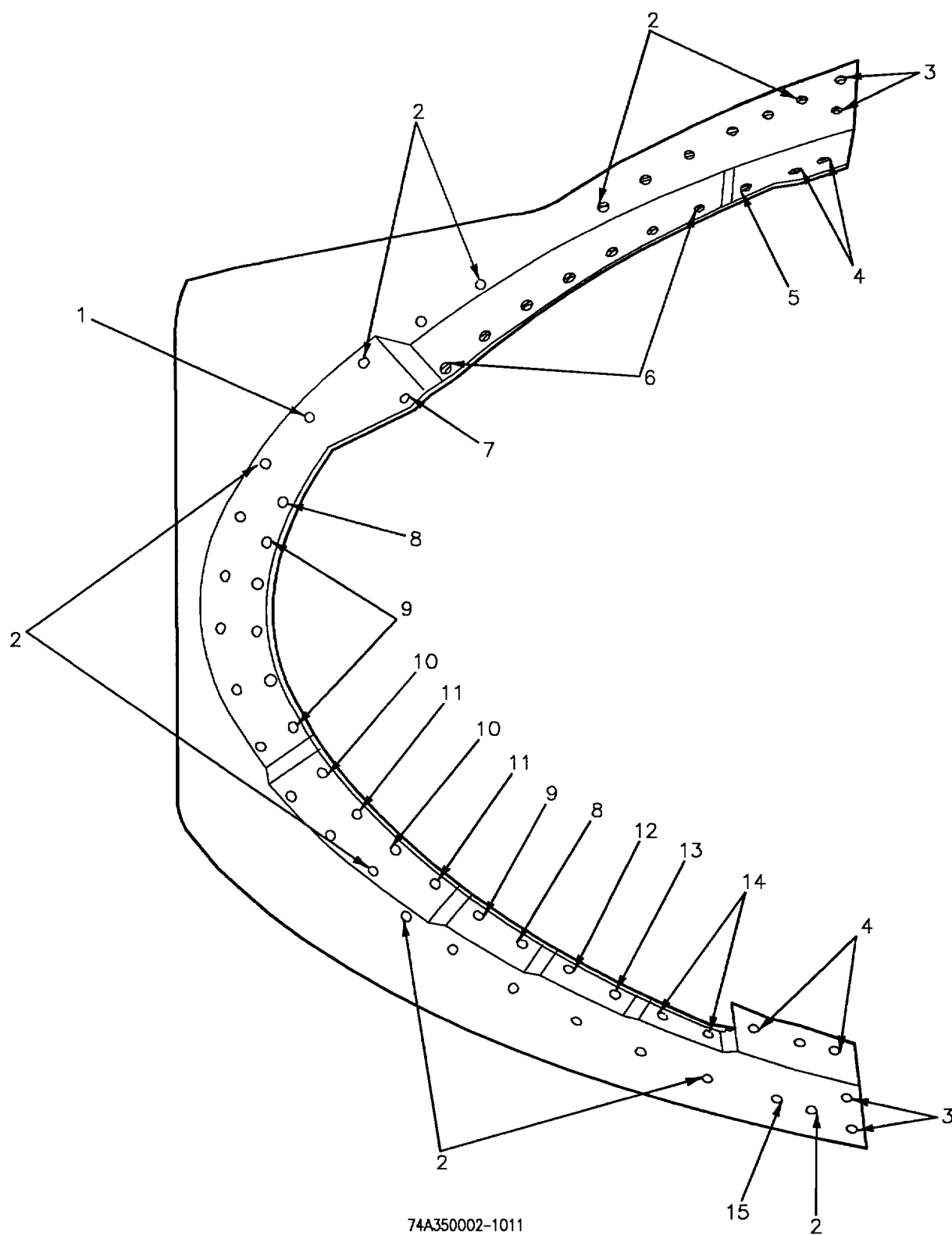
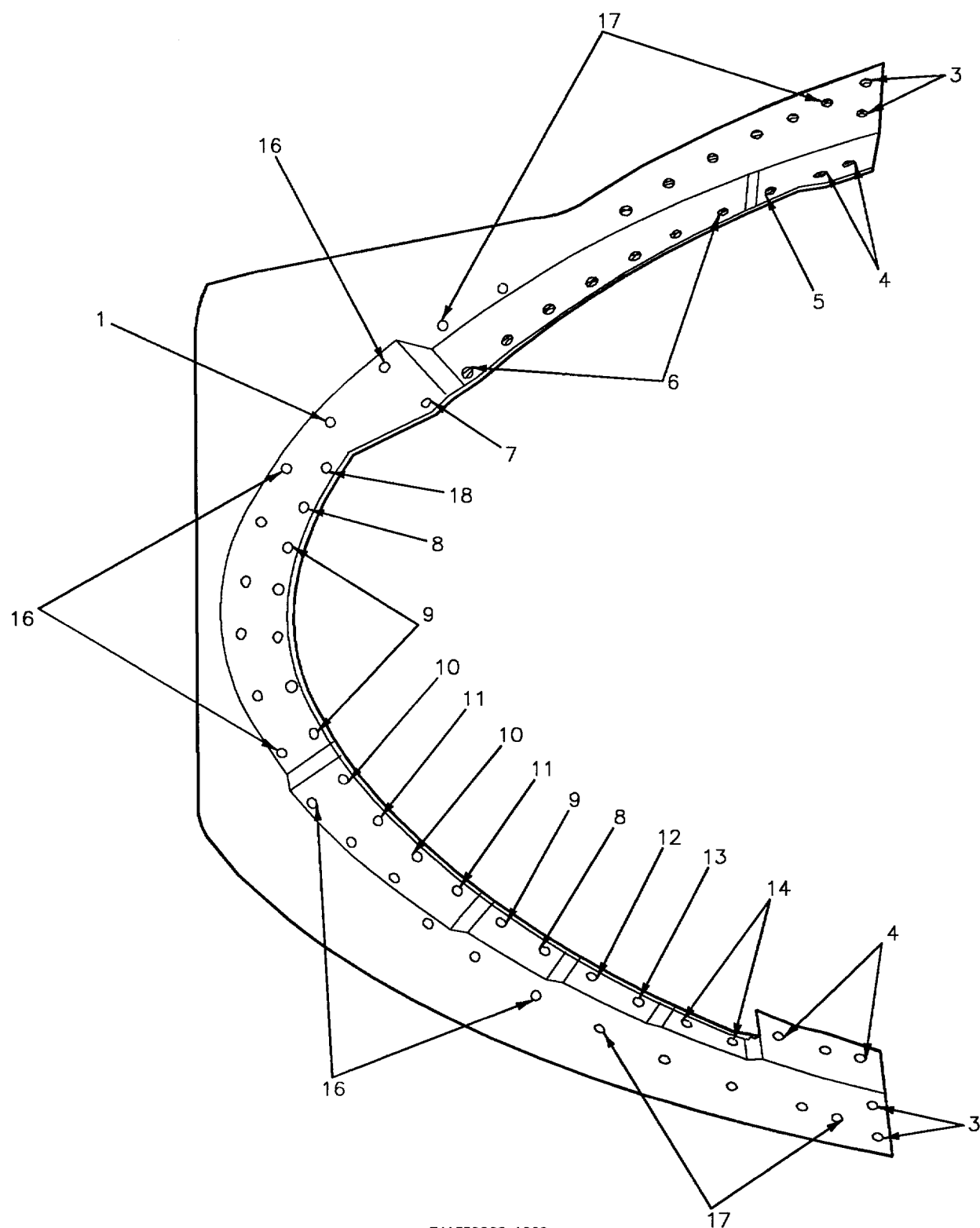


Figure 16. Forward Fairing Fastener Index (Sheet 1)



74A350002-1009

Figure 16. Forward Fairing Fastener Index (Sheet 2)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO.	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1	162	1	0.195 +0.007 -0.000	TFIM25.0204-124 7	HT4041-3-5-5 3			MF50591-3 6
2	128, 130, 133, 135, 137, 139, 141, 143, 145, 147, 149, 151, 154, 156, 158, 160, 163, thru 171	25	0.195 +0.007 -0.000	TFIM25.0204-124 7	HT4041-3-2-5 3			MF50591-3 6
3	126, 127, 172, 173	4	0.195 +0.007 -0.000	TFIM25.0204-124 7	HT4024L3-3 3			F50339-3-1 6
4	49 thru 51, 77, 78	5	0.195 +0.007 -0.000	PILOT 9 TFIM25.0215-004 NOM 8 SPT274A350004-5001TD 1ST OVS 8 SPT6RE174350004 2ND OVS 8 SPT7RE174350004 C'SINK 7 TFIM25.014-104	HT4024L3-16 2	AN960C10L		NAS1291C3M
5	76	1	0.195 +0.007 -0.000	PILOT 9 TFIM25.0215-004 NOM 8 SPT274A350004-5001TD 1ST OVS 8 SPT6RE174350004 2ND OVS 8 SPT7RE174350004 C'SINK 7 TFIM25.014-104	HT4024L3-16 2	AN960C10L	NAS42DD6-7	NAS1291C3M

Figure 16. Forward Fairing Fastener Index (Sheet 3)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO.	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
6	69 thru 75	7	0.195 +0.007 -0.000	PILOT 9 TFIM25.0215-004 NOM 8 SPT274A350004-5001TD 1ST OVS 8 SPT6RE174350004 2ND OVS 8 SPT7RE174350004 C'SINK 7 TFIM25.014-104	HT4024L3-16 2	AN960C10L		NAS1291C3M
7	68	1	0.195 +0.007 -0.000	PILOT 9 TFIM25.0215-004 NOM 8 SPT274A350004-5001TD 1ST OVS 8 SPT6RE174350004 2ND OVS 8 SPT7RE174350004 C'SINK 7 TFIM25.014-104	HT4024L3-20 2	AN960C10		NAS1291C3M
8	138, 159	2	0.195 +0.007 -0.000	TFIM25.0204-124 7	HT4041-3-6-5 3		NAS42DD6-7	MF50591-3 5
9	140, 150, 152, 153, 155, 157	6	0.195 +0.007 -0.000	TFIM25.0204-124 7	HT4041-3-6-5 3		NAS42DD6-8	MF50591-3 6
10	144, 148	2	0.195 +0.007 -0.000	TFIM25.0204-124 7	HT4041-3-7-5 3		NAS42DD6-12	MF50591-3 6
11	142, 146	2	0.195 +0.007 -0.000	TFIM25.0204-124 7	HT4041-3-7-5 3		NAS42DD6-11	MF50591-3 5
12	136	1	0.195 +0.007 -0.000	TFIM25.0204-124 7	HT4041-3-5-5 3		NAS42DD6-5	MF50591-3 6
13	134	1	0.195 +0.007 -0.000	TFIM25.0204-124 7	HT4041-3-5-5 3		NAS42DD6-4	MF50591-3 6
14	131, 132	2	0.195 +0.007 -0.000	TFIM25.0204-124 7	HT4041-3-5-5 3		NAS42DD6-3	MF50591-3 6
15	129	1	0.195 +0.007 -0.000	TFIM25.0204-124 7	HT4041-3-4-5 3			MF50591-3 5

Figure 16. Forward Fairing Fastener Index (Sheet 4)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO.	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
16 4	137, 139, 141, 143, 145, 147, 149, 151, 154, 156, 158, 160, 163	13	0.195 +0.007 -0.000	TFIM25.0204-124 7	HT4041-3-3-5 3			MF50591-3 6
17 4	128, 129 130, 133, 135, 164 thru 171	13	0.195 +0.007 -0.000	TFIM25.0204-124 7	HT4041-3-4-5 3			MF50591-3 6
18 4	161	1	0.195 +0.007 -0.000	TFIM25.0204-124 7	HT4041-3-6-5 3			MF50591-3 6
<p style="text-align: center;">LEGEND</p> <p>1 For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07).</p> <p>2 Torque fastener to 30-35 inch lbs.</p> <p>3 Torque fastener to 15-25 inch lbs.</p> <p>4 For 1009 assembly only.</p> <p>5 Attach plate nuts to fairings with 1415-0310.</p> <p>6 For attaching rivets see (A1-F18AC-SRM-200, WP004 05).</p> <p>7 This is part of 74D110325-1001 aircraft tool kit.</p> <p>8 This is part of RE274350002-1 windshield repair kit.</p> <p>9 This is part of RE274350006-1 canopy repair kit.</p>								

Figure 16. Forward Fairing Fastener Index (Sheet 5)

DEPOT MAINTENANCE

STRUCTURE REPAIR

WINDSHIELD TRANSPARENCY REMOVAL, INSTALLATION, AND REPLACEMENT

Reference Material

Maintenance Fixture, RE174350002, Loading Windshield	WP004 01
Aircraft Corrosion Control	A1-F18AC-SRM-500
Windshield, Canopy, and Cockpit Finish System	WP021 00
Structure Repair, General Information	A1-F18AC-SRM-200
Oversize Fasteners	WP004 07
Adhesive, Cement, and Sealant; Preparation and Application	WP011 00

Alphabetical Index

Subject	Page No.
Damaged Transparency Replacement	9
Drilling New Transparency and Structure	17
Transparency, 74A350600, Removal and Installation	1
Installation	2
Removal	2

Record of Applicable Technical Directives

None

1. TRANSPARENCY, 74A350600, REMOVAL AND INSTALLATION. See figure 1.

Materials Required

Support Equipment Required		Materials Required	
Nomenclature	Part Number or Type Designation	Nomenclature	Specification or Part Number
Aircraft Structure Repair Tool Kit	74D110325-1001	Cheesecloth	CCC-C-440, Type 1, Class 1
Maintenance Fixture, Windshield	RE174350002-1	Cloth, Cleaning	Rymple Cloth-301-Purified
Repair Kit, Canopy	RE274350006-1	Isopropyl Alcohol	TT-I-735, Grade B
Repair Kit, Windshield	RE274350002-1	Methyl Ethyl Ketone	TT-M-261
		Primer, Adhesive	PR142
		Rubber Compound	RTV90
		Sealing Compound	PR-1725, B-2

2. REMOVAL.



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

- a. Make sure windshield is loaded correctly and secure (WP004 01).

NOTE

74A350627 deflector must be removed to gain access to transparency fasteners.

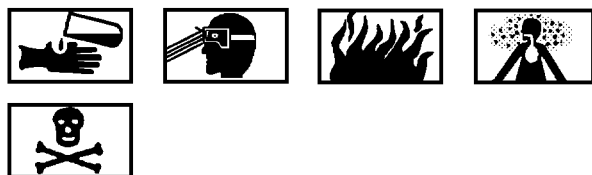
- b. Remove fasteners at hole numbers 1 through 125, figure 2.

- c. Remove transparency from windshield.



Use care when cleaning residual sealing compound and adhesive from structure to prevent damage to 74A350002 silicone rubber strips.

- d. Clean all residual sealing compound and adhesive from mating windshield structure with a plastic scraper.



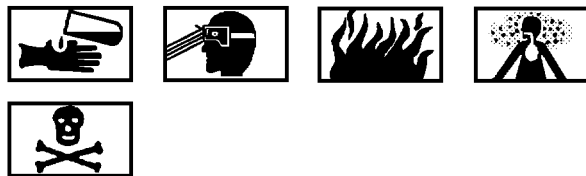
Methyl Ethyl Ketone

5

- e. Clean mating windshield structure with cheese-cloth moistened with methyl ethyl ketone.

- f. Touch up areas where finish system is missing (A1-F18AC-SRM-500, WP021 00).

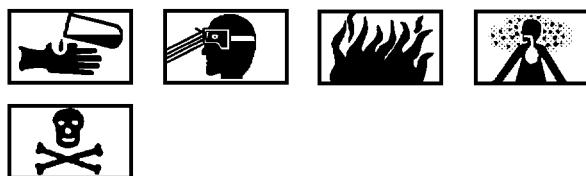
3. INSTALLATION.



Isopropyl Alcohol

2

- a. Clean all surfaces on transparency and mating windshield structure receiving sealing compound and adhesive with cleaning cloth moistened with isopropyl alcohol.

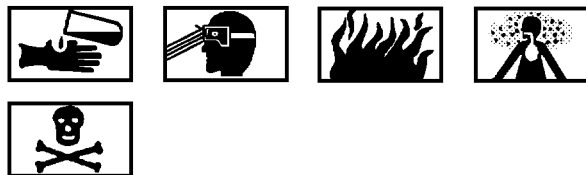


Adhesive Primer

19

- b. Brush apply one thin coat of adhesive primer to surfaces on transparency and mating windshield structure receiving sealing compound.

- c. Allow adhesive primer to air dry for a minimum of 15 minutes before applying sealing compound.



Sealing Compound

20

- d. Prepare sealing compound by mixing base component and accelerator to a weighed ratio of 100 parts base component to 10 parts accelerator.

- e. Thoroughly mix components until a uniform color appears.

- f. Position transparency on windshield structure and apply sealant, figure 1.

- (1) Fay surface seal areas indicated (A1-F18AC-SRM-200, WP011 00).

- (2) Wet install fasteners at hole numbers 1 through 125. See figure 2 and (A1-F18AC-SRM-200, WP011 00).

- (3) Fillet seal areas indicated (A1-F18AC-SRM-200, WP011 00).

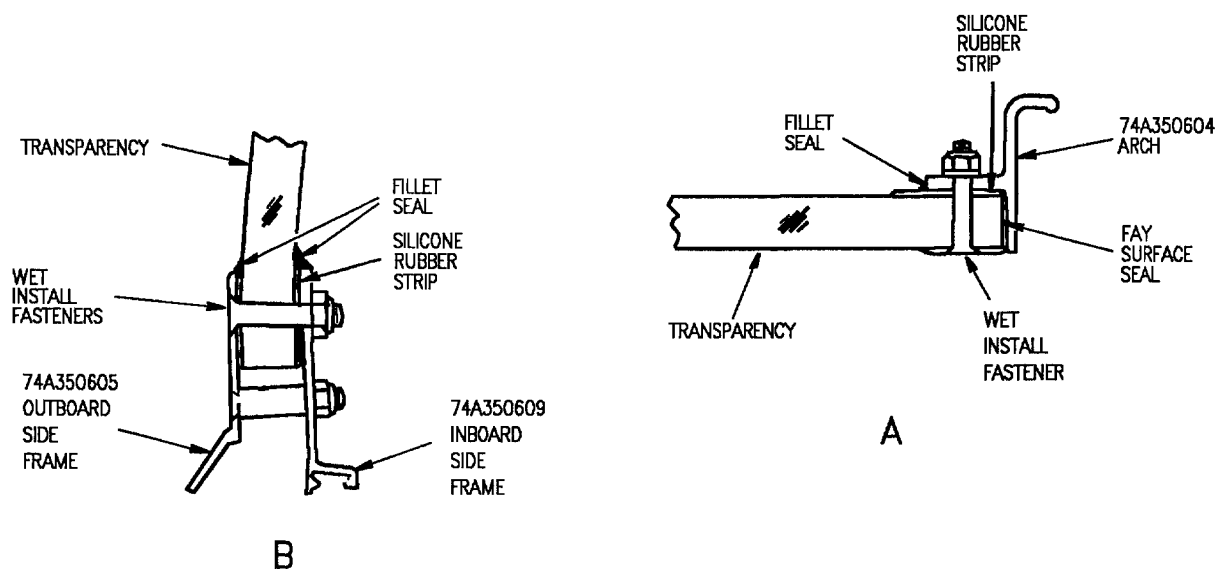
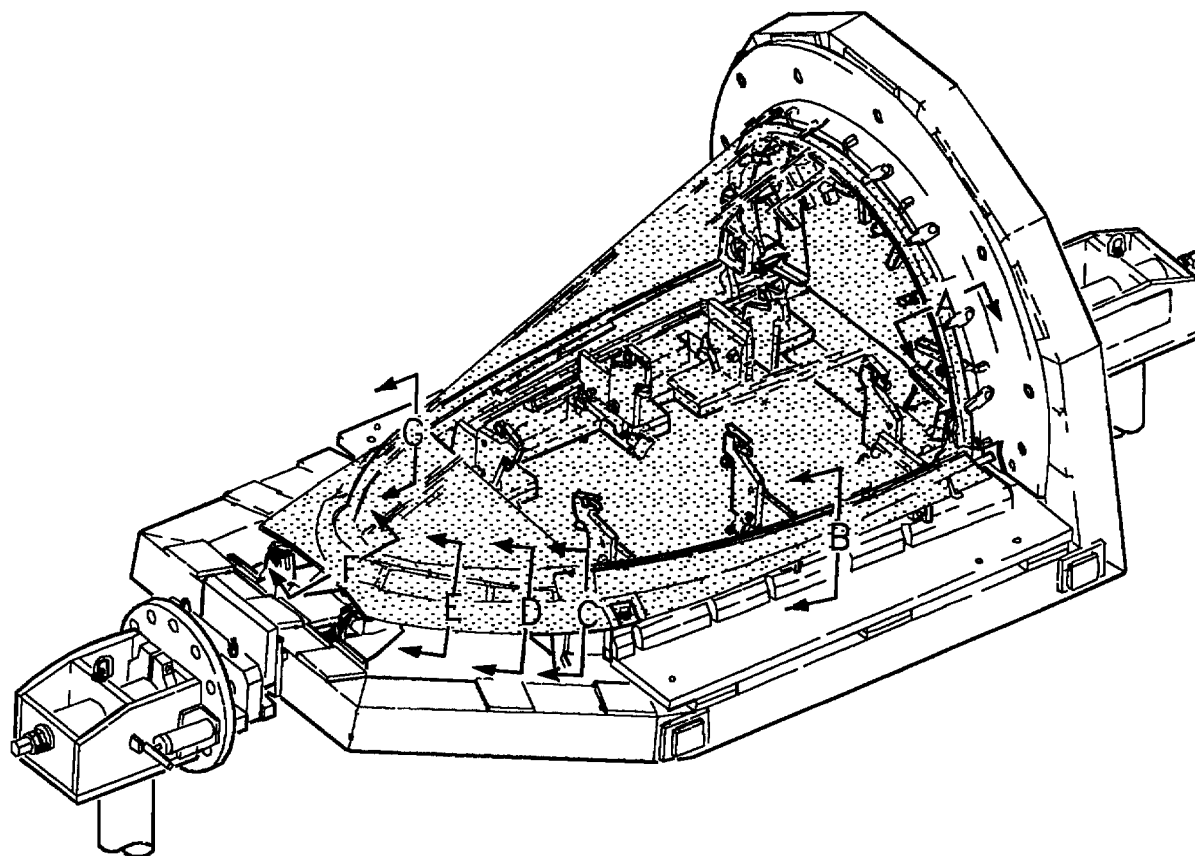
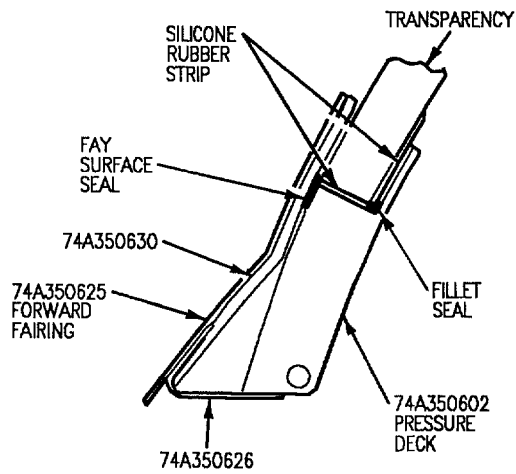
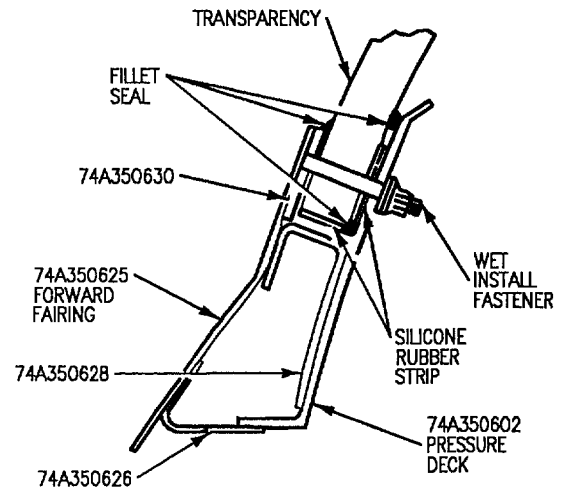


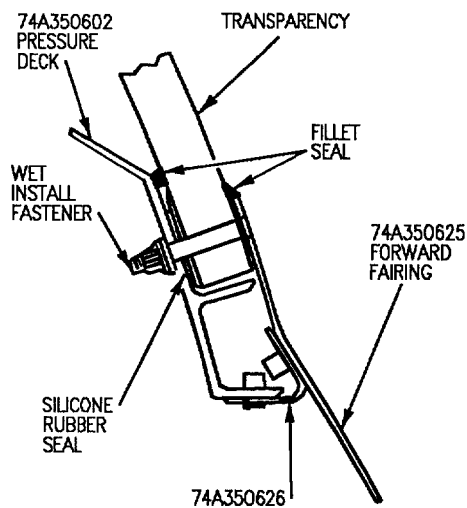
Figure 1. Transparency Removal and Installation (Sheet 1)



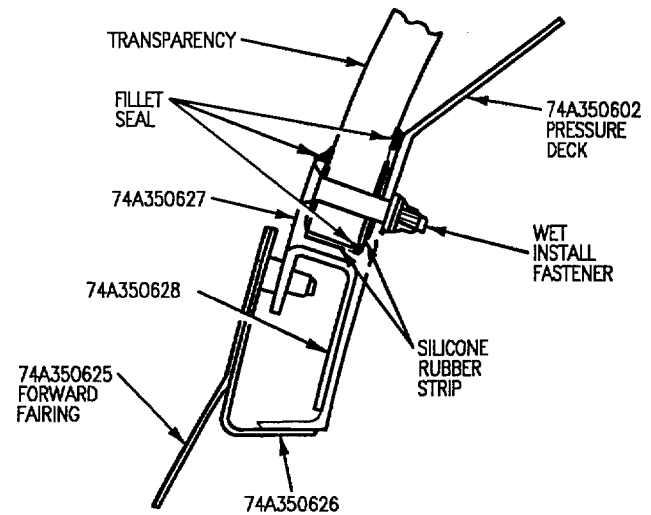
C



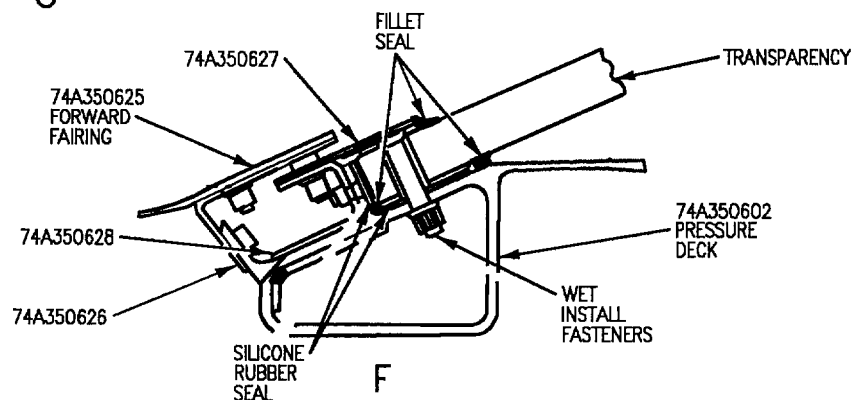
D



G



E



F

Figure 1. Transparency Removal and Installation (Sheet 2)

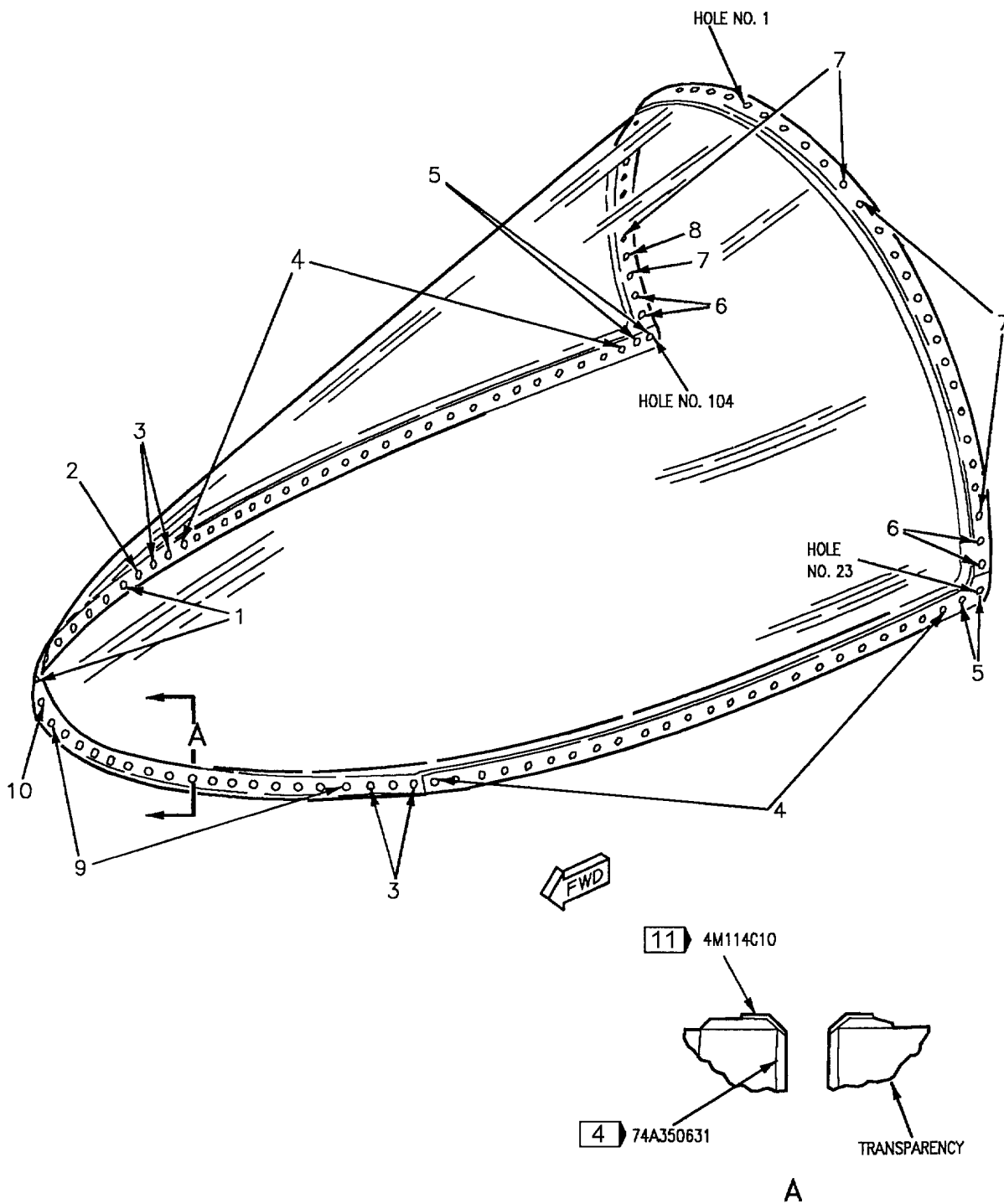


Figure 2. Transparency Fastener Index (Sheet 1)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO.	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1	69 thru 75	7	0.195 +0.007 -0.000	PILOT 13 TFIM25.0215-004 NOM 7 SPT274A350004-5001TD 1ST OVS 7 SPT6RE174350004 2ND OVS 7 SPT7RE174350004	HT4024L3-16 2	AN960C10L		NAS1291C3M
2	76	1	0.195 +0.007 -0.000	PILOT 13 TFIM25.0215-004 NOM 7 SPT274A350004-5001TD 1ST OVS 7 SPT6RE174350004 2ND OVS 7 SPT7RE174350004	HT4024L3-16 2	AN960C10L	NAS42DD6-7	NAS1291C3M
3	49 thru 51, 77, 78	5	0.195 +0.007 -0.000	PILOT 13 TFIM25.0215-004 NOM 7 SPT674A350004-5001TD 1ST OVS 7 SPT6RE174350004 2ND OVS 7 SPT7RE174350004	HT4024L3-16 2	AN960C10L		NAS1291C3M
4	25 thru 48, 79 thru 102	48	0.257 +0.006 -0.000	PILOT 13 TFIM25.0215-038 NOM 7 SPT674A350002-5001TD 1ST OVS 7 SPT8RE174350002 2ND OVS 7 SPT9RE174350002	NAS664V16HT 2	AN960C416L		NAS1291C4M
5	23, 24, 103, 104	4	0.257 +0.006 -0.000	PILOT 13 TFIM25.0215-038 NOM 7 SPT674A350002-5001TD 1ST OVS 7 SPT8RE174350002 2ND OVS 7 SPT9RE174350002	NAS664V18HT 3 14 15 NAS664V24HT 3 5 15 ST3M466V4L20-1 3 14 16 ST3M466V4L24-1 3 5 16	AN960C416L		NAS1291C4M

Figure 2. Transparency Fastener Index (Sheet 2)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO.	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
6	21, 22, 105, 106	4	0.195 +0.007 -0.000	PILOT 13 TFIM25.0215-004 NOM 7 SPT274A350004-5001TD 1ST OVS 7 SPT6RE174350004 2ND OVS 7 SPT7RE174350004 C'SINK 6 TFIM25.014-104	NAS663V17HT 2	AN960C10L		NAS1291C3M
7	1 thru 20, 107, 109 thru 125	38	0.195 +0.007 -0.000	PILOT 13 TFIM25.0215-004 NOM 7 SPT274A350004-5001TD 1ST OVS 7 SPT6RE174350004 2ND OVS 7 SPT7RE174350004 C'SINK 6 TFIM25.014-104	NAS663V15HT 2	AN960C10L		NAS1291C3M
8	108	1	0.195 +0.007 -0.000	PILOT 13 TFIM25.0215-004 NOM 7 SPT274A350004-5001TD 1ST OVS 7 SPT6RE174350004 2ND OVS 7 SPT7RE174350004 C'SINK 6 TFIM25.014-104	NAS663V21HT 2	AN960C10L 9 AN960C10 10		NAS1291C3M
9	52 thru 67	16	0.290 +0.007 -0.000	PILOT 13 TFIM25.0215-004 NOM 7 SPT274A350004-5001TD 1ST OVS 7 SPT6RE174350004 2ND OVS 7 SPT7RE174350004 C'SINK 6 TFIM25.014-104	NAS663V14HT 8	AN960C10L 12 4M114C10 11	74A350631 4	NAS1291C3M

Figure 2. Transparency Fastener Index (Sheet 3)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO.	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
10	68	1	0.195 +0.007 -0.000	PILOT 13 TFIM25.0215-004 NOM 7 SPT274A350004-5001TD 1ST OVS 7 SPT6RE174350004 2ND OVS 7 SPT7RE174350004 C'SINK 6 TFIM25.014-104	HT4024L3-20 2	AN960C10		NAS1291C3M
<p style="text-align: center;">LEGEND</p> <p>1 For oversize repair fasteners see (A1-F18AC-SRM-200, WP004 07).</p> <p>2 Torque fastener to 30-35 inch lbs.</p> <p>3 Torque fastener to 50-60 inch lbs.</p> <p>4 Bond spacer to transparency with adhesive.</p> <p>5 Two required, right side only.</p> <p>6 This is part of 74D110325-1001 aircraft tool kit.</p> <p>7 This is part of RE274350002-1 windshield repair kit.</p> <p>8 Torque fasteners to 20-25 inch lbs.</p> <p>9 Install under nut.</p> <p>10 Two required, install between 74A350727 and 74A350604.</p> <p>11 Bond washer to transparency using RTV90.</p> <p>12 Two required, install under nut.</p> <p>13 This is part of RE274350006-1 canopy repair kit.</p> <p>14 Two required, left side only.</p> <p>15 Use on P/N 74A350002-1005/-1007/-1009 windshield assemblies.</p> <p>16 Use on P/N 74A350002-1011 windshield assemblies.</p>								

Figure 2. Transparency Fastener Index (Sheet 4)

4. DAMAGED TRANSPARENCY REPLACEMENT. See figure 3.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Accessory Kit, Drilling Machine	RE574000002-1
Drill Machine, Hydraulic Feed	74D110311-1001
Maintenance Fixture, Windshield	RE174350002-1
Maintenance Stands	RE474000002-1
Tank Assembly, Coolant, Spray Mist	RE874000002-1
Windshield Drill Jig	74D110310-1001

Materials Required

None

a. Remove damaged transparency per paragraph 2, this WP.



To prevent damage to new transparency, make sure barrier material and ethyl foam cushioning material is installed.

b. Position new transparency on mating windshield structure.

c. Locate drill blanket (detail 33) over transparency by inserting L-pins (detail 122) and secure with handknobs (detail 123).

d. Adjust swivel foot screw (detail 261) to contact transparency 15 places, view A.

e. Secure transparency along 74A350604 arch eight places, view B:

(1) Install clamp half (detail 12) through holes of arch base (detail 101).

(2) Install clamp half (detail 13) over clamp half (detail 12) and rotate to lock position.

(3) Tighten screw clamp (detail 102) until transparency is secure to arch.

f. Rotate maintenance fixture on maintenance stands to provide drilling access from inside windshield assembly (WP004 01).

g. At hole locations 1 through 20 and 107 through 125, see figure 2:

(1) Mark location of any fastener hole in 74A350604 arch drilled oversized.

(2) Install applicable traveler bushing (detail 26, 28, or 37) into existing holes in 74A350604 arch, view C.

(3) Back drill 0.1285 inch diameter pilot hole 0.100-inch deep.

h. At hole locations 24 through 48 and 79 through 103, see figure 2:

(1) Mark location of any fastener hole in 74A350609 side frame drilled oversize.

(2) Install applicable traveler bushing (detail 38, 44, or 46) into existing holes in 74A350609 inboard side frame, view E.

(3) Back drill 0.1770 inch diameter pilot hole 0.100-inch deep.

i. At hole locations 23 and 104, see figure 2:

(1) Mark location of any fastener hole in 74A350609 inboard side frame drilled oversize.

(2) Install applicable traveler bushing (detail 56, 57, or 58) into existing holes in 74A350609 inboard side frame, view D.

(3) Back drill 0.1770 inch diameter pilot hole 0.100-inch deep.

j. At hole locations 51 through 58 and 69 through 76, see figure 2:

(1) Mark location of any fastener hole in 74A350602 pressure deck drilled oversize.

(2) Install applicable traveler bushing (detail 26, 28, or 37) into existing holes in 74A350602 pressure deck, view F.

(3) Back drill 0.1285 inch diameter pilot hole 0.100-inch deep.

k. Rotate maintenance fixture back to the upright position (WP004 01).

l. Remove drill blanket (detail 33).

m. Remove transparency.

n. Open back drilled holes full size, detail G:

(1) Position 74D110310-1001 transparency drill jig over 0.100-inch deep back drilled holes.

(2) Insert 0.1285 or 0.1170 inch diameter locating pin (detail 101, 102 part of 74D110310-1001 drill jig) into applicable back drilled holes and clamp in place.

(3) Remove locating pin.

(4) Insert coolant bushing (subassembly A, B part of 74A311310-1001 drill jig) into 74D110310-1001 drill jig.

(5) Attach RE874000002-1 tank assembly to coolant bushing and peck drill pilot hole through transparency using 1000 RPM hand drill and applicable pilot hole drill per figure 2.

(6) Remove coolant bushing.

(7) Install RE574000002-1 coolant bushing and nose piece (subassembly Y, Z and detail 151) on 74D110311-1001 drill machine.

(8) Adjust feedrate to 1.5 inch/minute and dwell to 1 second.

(9) Install 74D110311-1001 drill machine to 74A311310-1001 drill jig.

(10) Attach RE874000002-1 tank assembly to RE574000002-1 coolant bushing.

(11) Drill holes full size using applicable drill per figure 2.

o. Locate drill blanket (detail 33) over windshield structure by inserting L-pins (detail 122) and secure with handknobs (detail 123).

p. At hole locations 21, 22, 105, and 106; see figure 2:

(1) Insert centering scope (detail 284) through drill bushing (detail 33C), view L.

(2) Determine if nominal size, first oversize, or second oversize conditions exist by drill size indicator readings on centering scope (detail 284), view N.

(3) Remove centering scope (detail 284) and insert drill bushing (detail 285 or 286) in drill bushing (detail 33C) if oversize drilling is required, view K.

(4) Drill holes in 74A350605 arch to size indicated from readings in step (2).

(5) Record hole location of oversize drilling for use when drilling transparency.

q. At hole locations 49, 50, 59 through 68, 77, and 78; see figure 2.

(1) Insert centering scope (detail 284) through drill bushing (detail 33C), view M.

(2) Determine if nominal size, first oversize, or second oversize conditions exist by drill size indicator readings on centering scope (detail 284), view N.

(3) Remove centering scope (detail 284) and insert drill bushing (detail 285, 286, or 287) in drill bushing (detail 33C) if oversize drilling is required, view K.

(4) Drill holes in 74A350602 pressure deck to size indicated from readings in step (2).

(5) Record hole location of oversize drilling for use when drilling transparency.

r. Remove drill blanket (detail 33).

s. Position transparency on windshield structure and secure by installing several fasteners at various locations, figure 2.

t. Locate drill blanket (detail 33) over transparency by inserting L-pins (detail 122) and secure with handknobs (detail 123).

u. Drill holes in transparency at hole locations 21, 22, 49, 50, 59 through 68, 77, 78, 105 and 106, see figure 2.

v. Remove drill blanket (detail 33).

w. Remove fasteners temporarily securing transparency to windshield structure.

x. Remove transparency.

y. Clean area of all loose material.

z. Install new transparency on windshield structure per paragraph 3, this WP.

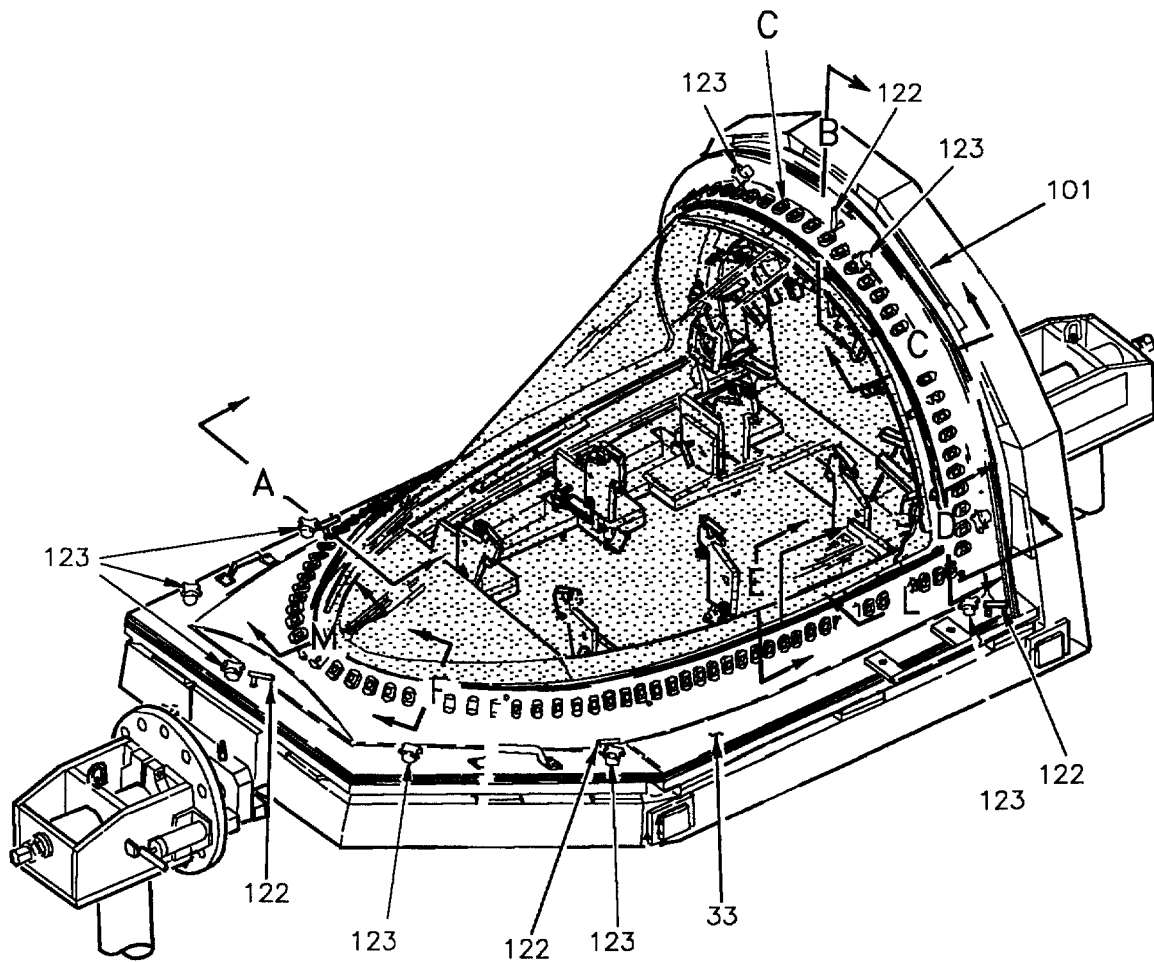


Figure 3. Damaged Transparency Replacement (Sheet 1)

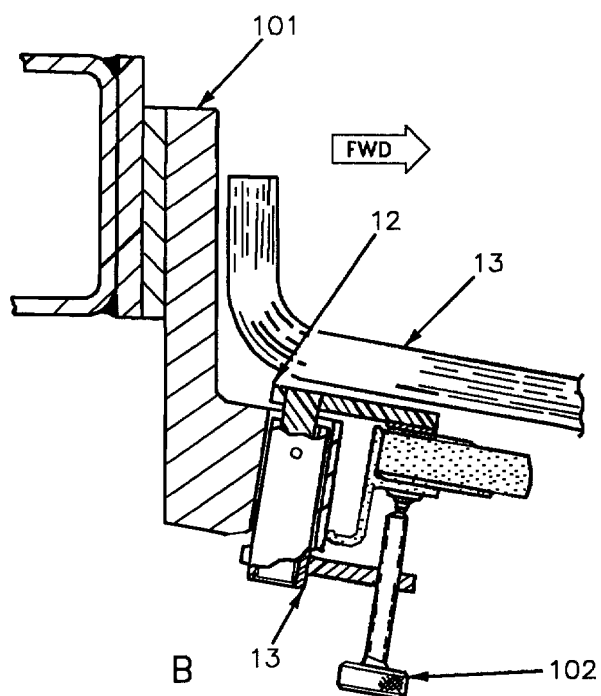
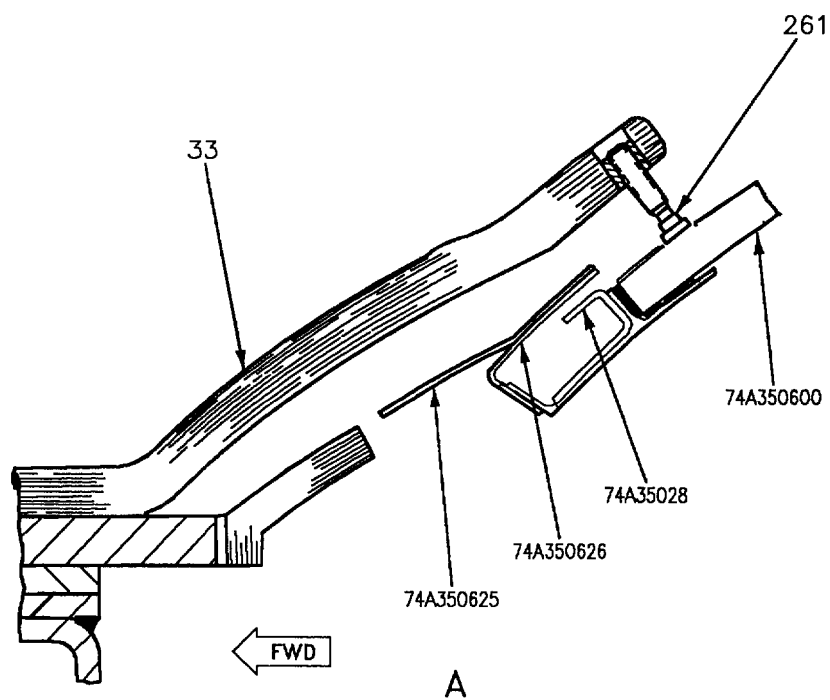
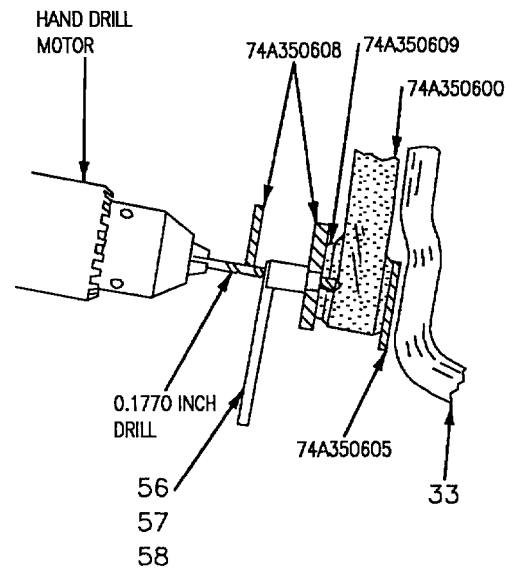
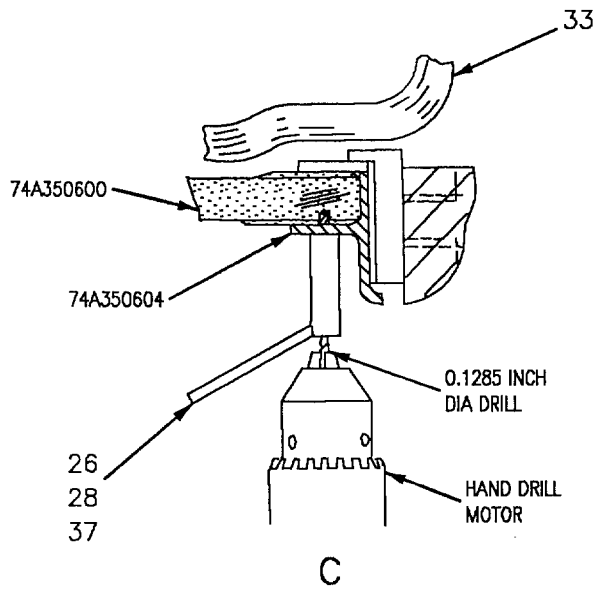
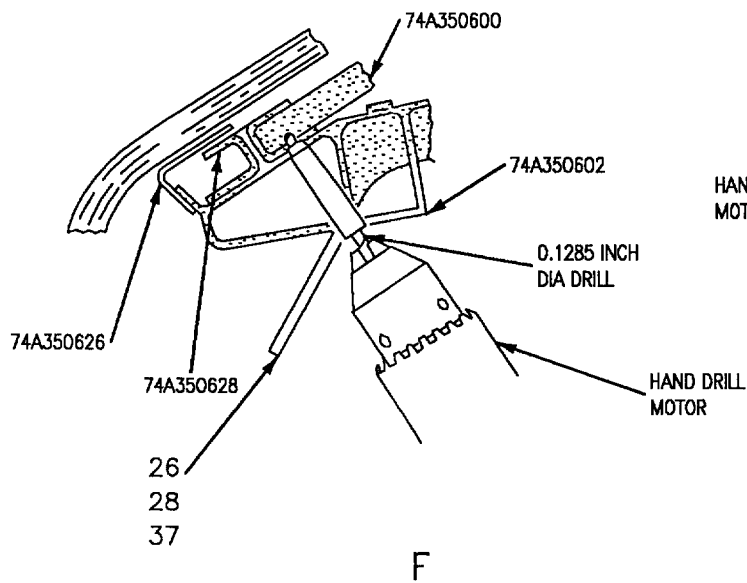


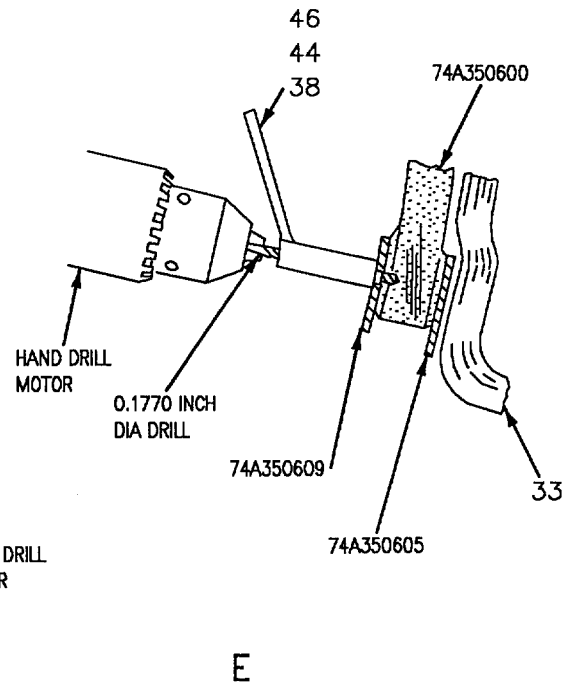
Figure 3. Damaged Transparency Replacement (Sheet 2)



D



F



E

Figure 3. Damaged Transparency Replacement (Sheet 3)

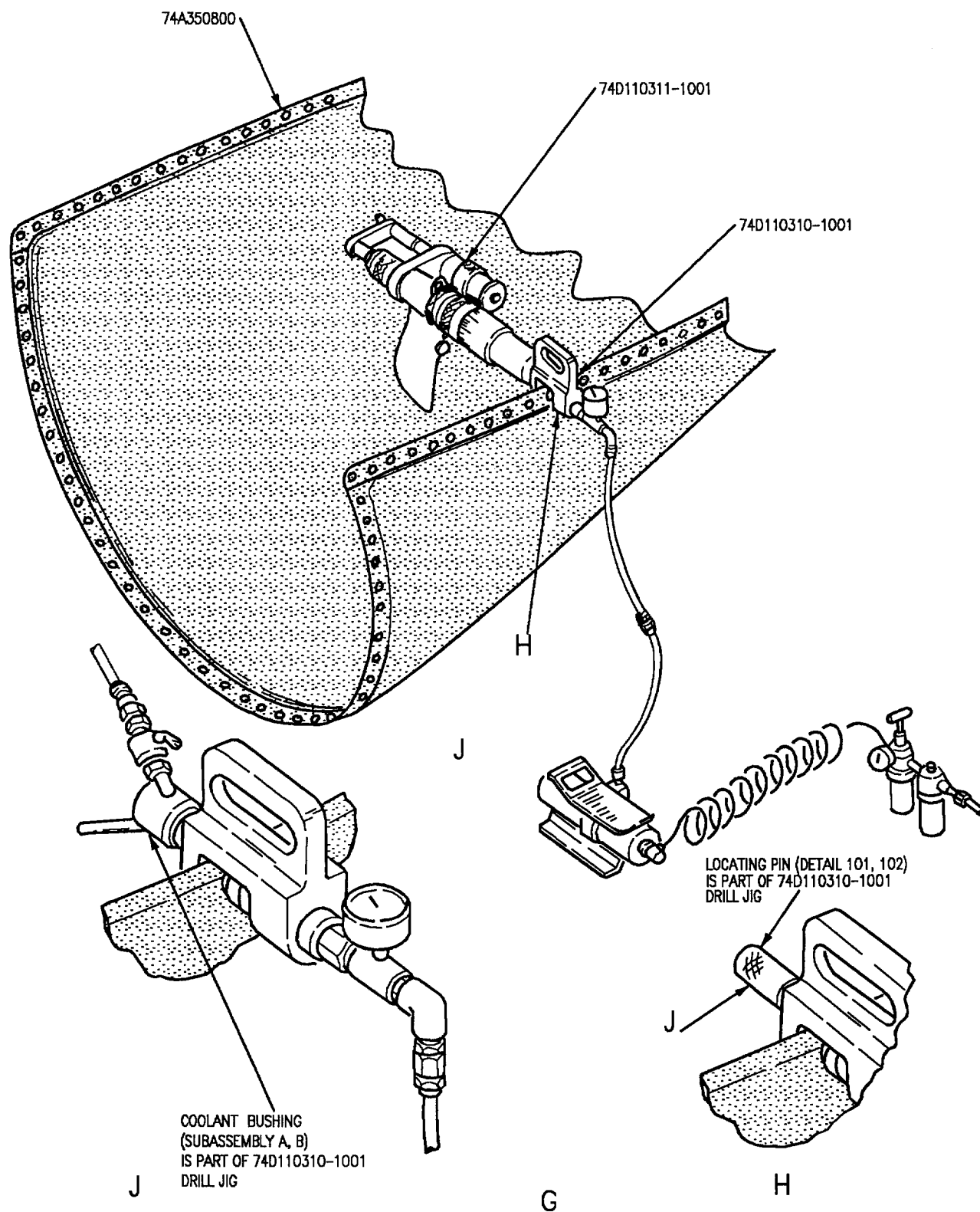


Figure 3. Damaged Transparency Replacement (Sheet 4)

DETAIL NO.	NAME	FUNCTION
12	Clamp half	Clamp assembly for holding transparency to the arch.
13	Clamp half	Clamp assembly for holding transparency to the arch.
26	Traveler bushing	Guides 0.1285 inch drill for nominal size hole.
28	Traveler bushing	Guides 0.1285 inch drill for first oversize hole.
33	Drill blanket	Provides transparency hole pattern location.
33C	Drill bushing	Guides drill or centering scope (detail 284).
37	Traveler bushing	Guides 0.1285 inch drill for second oversize hole.
38	Traveler bushing	Guides 0.1770 inch drill for nominal size hole.
44	Traveler bushing	Guides 0.1770 inch drill for first oversize hole.
46	Traveler bushing	Guides 0.1770 inch drill for second oversize hole.
56	Traveler bushing	Guides 0.1770 inch drill for nominal size hole.
57	Traveler bushing	Guides 0.1770 inch drill for first oversize hole.
58	Traveler bushing	Guides 0.1770 inch drill for second oversize hole.
101	Arch base	Base for arch locators.
102	Screw clamp	Used to clamp transparency to arch.
122	L-pin	Locates drill blanket (detail 33) on tool.
123	Handknob	Secures drill blanket (detail 33) on tool.
261	Swivel foot screw	Clamps transparency to structure.
284	Centering scope	Indicates drill size required to clean up an existing hole in windshield structure.
285	Drill bushing	Guides 0.2130 inch drill.
286	Drill bushing	Guides 0.2280 inch drill.
287	Drill bushing	Guides 0.2610 inch drill.

Figure 3. Damaged Transparency Replacement (Sheet 6)

5. DRILLING NEW TRANSPARENCY AND STRUCTURE. See figure 4.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Accessory Kit, Drilling Machine	RE574000002- 1
Drill Machine, Hydraulic Feed	74D110311-1001
Maintenance Fixture, Windshield	RE174350002-1
Tank Assembly, Coolant, Spray Mist	RE874000002-1

Materials Required

None



To prevent damage to new transparency, make sure barrier material and ethyl foam cushioning material is installed.

- a. Position new transparency on new windshield structure.
- b. Locate drill blanket (detail 33) over transparency by inserting L-pins (detail 122) and secure with handknobs (detail 123).
- c. Adjust swivel foot screws (detail 261) to contact transparency 15 places, view A.
- d. Secure transparency along 74A350604 arch eight places, view B:
 - (1) Install clamp half (detail 12) through holes of arch base (detail 101).

- (2) Install clamp half (detail 13) over clamp half (detail 12) and rotate to lock position.

- (3) Tighten screw clamp (detail 102) until transparency is secure to arch.

- e. At hole locations 1 through 22, 49 through 78, and 105 through 125; see figure 2:

- (1) Install subassembly D with quick disconnect coolant line in drill bushing (detail 33C), view C.

- (2) Drill 0.1285 inch pilot hole through transparency and windshield structure.

- (3) Install alignment pins (detail 197) in drill bushing (detail 33C) to maintain location of transparency on structure, view D.

- f. At hole locations 23 through 48 and 79 through 104, see figure 2:

- (1) Install subassembly E with quick disconnect coolant line in drill bushing (detail 33C), view F.

- (2) Drill 0.1770 inch pilot hole through transparency and windshield structure.

- (3) Install alignment pins (detail 263) in drill bushing (detail 33C) to maintain location of transparency on structure, view G.

- g. At hole locations 1 through 22, 49 through 78, and 105 through 125; see figure 2:

- (1) Install RE574000002-1 0.199 inch diameter coolant bushing and nosepiece in drill bushing (detail 33C), view E.

- (2) Install 74D110311-1001 on RE574000002-1.

- (3) Drill pilot holes full size through transparency and windshield structure, figure 2.

- (4) Install alignment pins (detail 262) in drill bushing (detail 33C) to maintain location of transparency on structure, view D.

h. At hole locations 23 through 48 and 79 thru 104, see figure 2:

(1) Install RE574000002-1 0.261 inch diameter coolant bushing and nosepiece in drill bushing (detail 33C), view H.

(2) Install 74D110311-1001 on RE574000002-1.

(3) Drill pilot holes full size through transparency and windshield structure, figure 2.

(4) Install alignment pins (detail 264) in drill bushing (detail 33C) to maintain location of transparency on structure, view G.

i. Remove drill blanket (detail 33).

j. Remove transparency.

k. Clean area of all loose material.

l. Install transparency on windshield structure per paragraph 3, this WP.

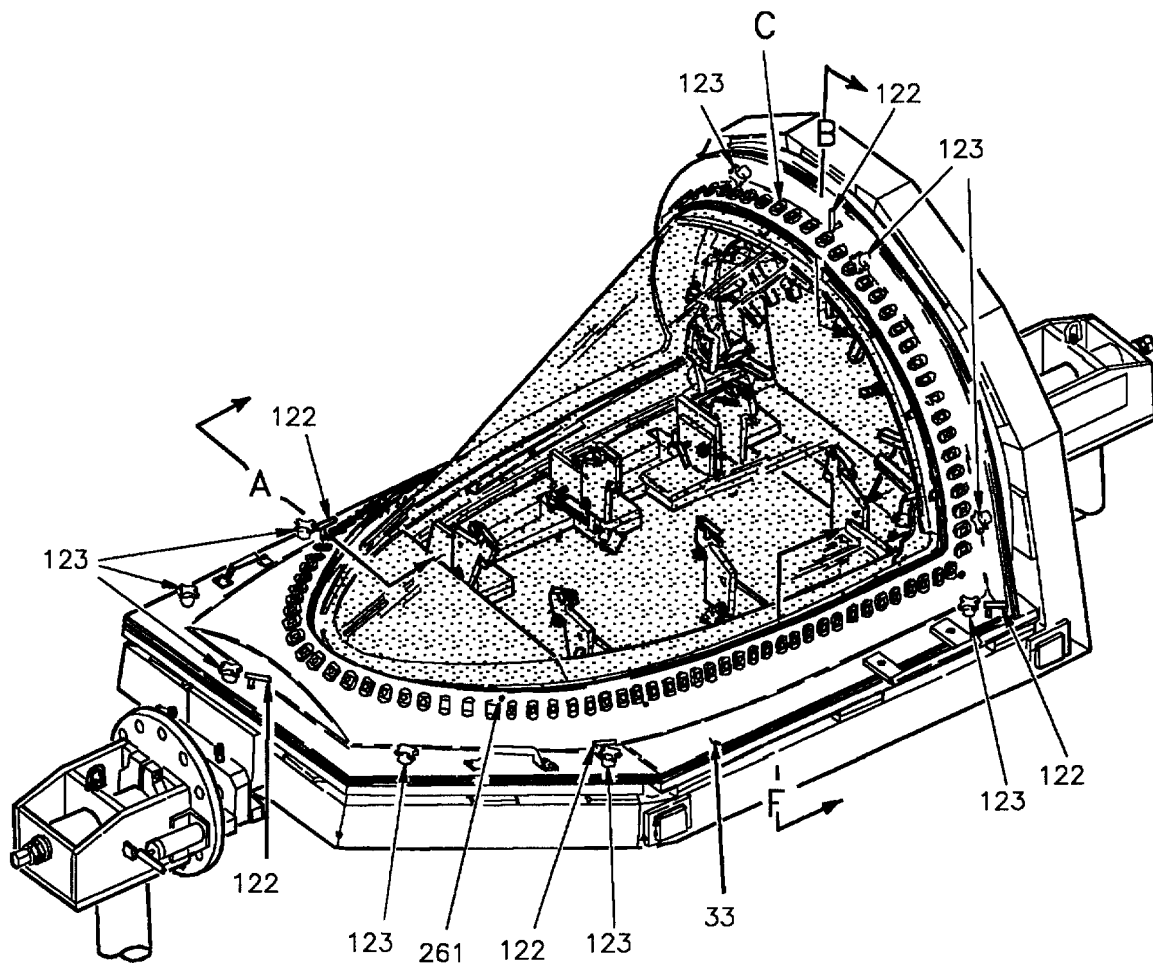


Figure 4. Drilling New Transparency and Structure (Sheet 1)

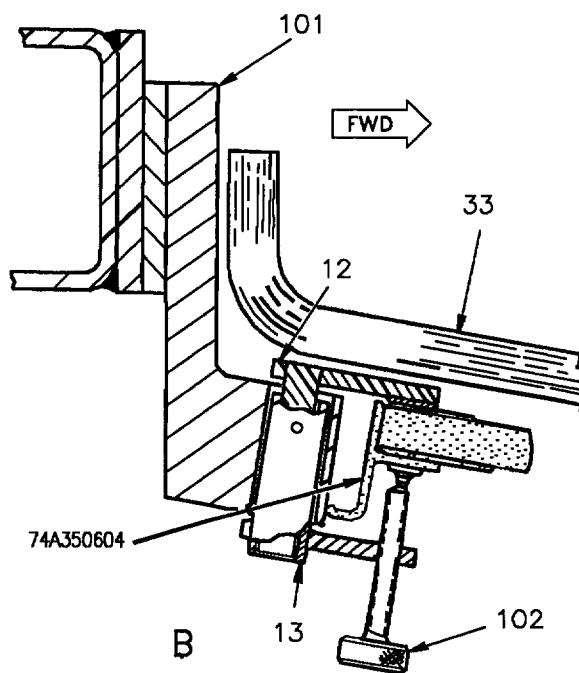
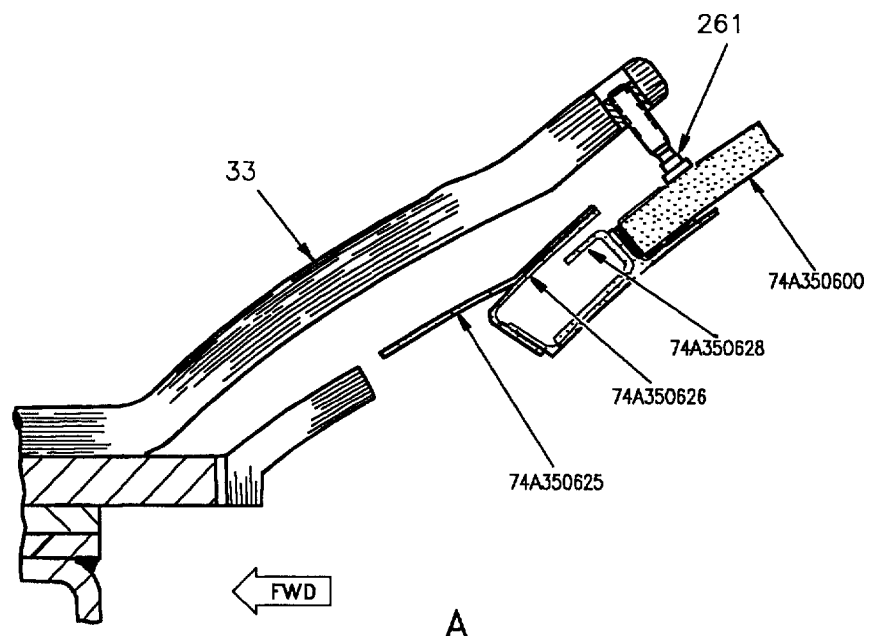


Figure 4. Drilling New Transparency and Structure (Sheet 2)

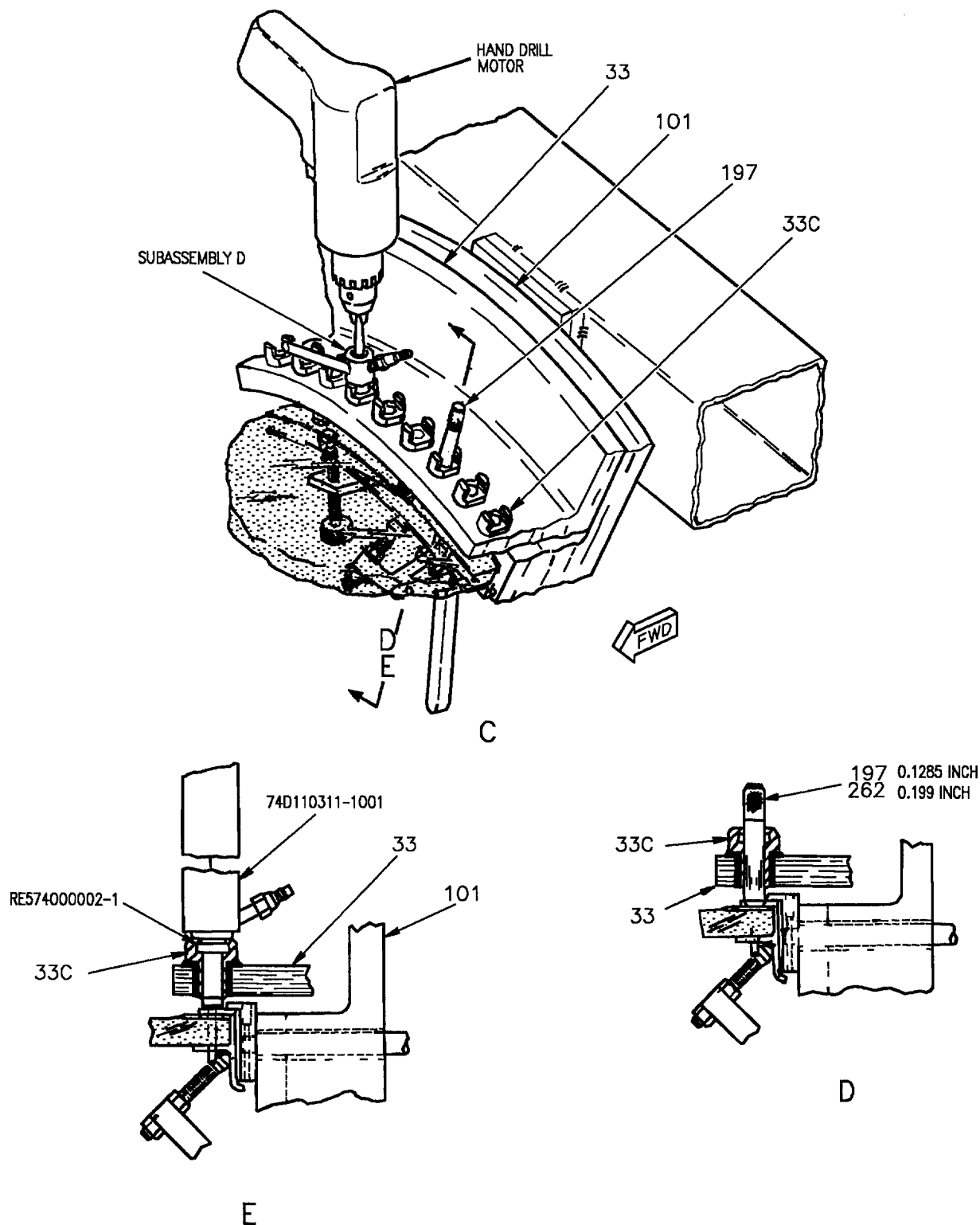


Figure 4. Drilling New Transparency and Structure (Sheet 3)

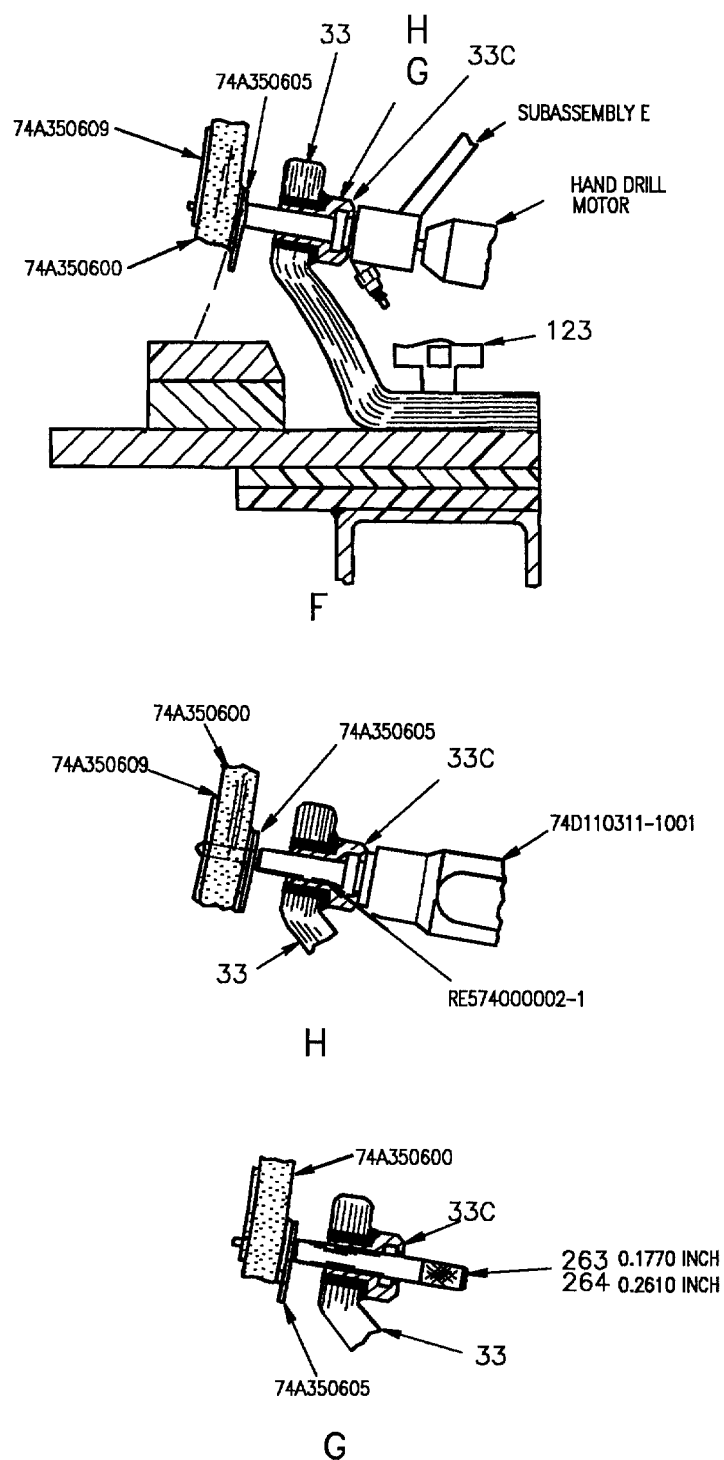


Figure 4. Drilling New Transparency and Structure (Sheet 4)

DETAIL NO.	NAME	FUNCTION
Subassembly D	Traveler bushing	Drills 0.1285 inch pilot hole.
Subassembly E	Traveler bushing	Drills 0.1770 inch pilot hole.
12	Clamp half	Clamps transparency to arch and clamp half (detail 13).
13	Clamp half	Clamps transparency to arch and clamp half (detail 12).
33	Drill blanket	Provides transparency hole pattern location.
33C	Drill bushing	Locates subassembly D or E and alignment pin (details 197, 262, 263, or 264).
101	Arch base	Base for arch locators.
102	Screw clamp	Used to clamp transparency to arch.
122	L-pin	Locates drill blanket (detail 33) on tool.
123	Handknob	Secures drill blanket (detail 33) on tool.
197	Alignment pin	Aligns transparency to 0.1285 inch pilot hole.
261	Swivel foot screw	Clamps transparency to structure.
262	Alignment pin	Aligns transparency to 0.195 inch hole.
263	Alignment pin	Aligns transparency to 0.1770 inch pilot hole.
264	Alignment pin	Aligns transparency to 0.257 inch hole.

Figure 4. Drilling New Transparency and Structure (Sheet 5)

ORGANIZATIONAL AND INTERMEDIATE MAINTENANCE**STRUCTURE REPAIR****CANOPY - F/A-18A**

Reference Material

F/A-18A Canopy Component Replacement	WP005 02
F/A-18A Canopy Transparency Removal, Installation, and Replacement	WP005 03
Cockpit Internal Doors and Covers	WP036 00
Aircraft Corrosion Control	A1-F18AC-SRM-500
Chemical Treatment	WP008 00
Windshield, Canopy, and Cockpit Finish System	WP021 00
Plane Captain Manual	A1-F18AC-PCM-000
Structure Repair, General Information	A1-F18AC-SRM-200
Introduction	WP002 00
Adhesive, Cement, and Sealant; Preparation and Application	WP011 00
Structure Repair, Typical Repair	A1-F18AC-SRM-250
Aluminum Sheet, Free of Structure and Land Areas	WP031 00
Aluminum and Titanium Sheet, Formed Structure	WP033 00
Aluminum Sheet Edge Repair	WP034 00
Aluminum Sheet Repairs, Across Structure and Lands	WP036 00
Blending	WP038 00
Aircraft Weapons Systems Cleaning and Corrosion Control	NAVAIR 01-1A-509
Universal Optical Micrometer Kit	T.O. 33B4-2-10-1

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Record of Applicable Technical Directives

None

1. **STRUCTURE.****NOTE**

The limits in table 2 apply after blending the damage.

a. Scratches.

(1) Any scratches within one diameter of any hole must be blended out. Minimum blend out is one diameter from edge of any hole.

(2) Scratches to be blended out with diameter, or width, at surface at least 20 times the depth.

b. Nicks, gouges, and corrosion to be blended out with diameter, or width, at surface at least 20 times the depth.

c. Cracks. All cracks must be repaired.

d. Holes.

(1) Damage in areas free of structure and lands must have edge of cleanup hole at least eight repair fastener diameters from any land, internal structure, or existing row of fasteners.

(2) Damage to lands, overstructure, only one repair per land.

e. Dents exceeding the limits in table 1 must be repaired.

2. **DAMAGE EVALUATION.** See figures 1 and 2. Damage is classified as negligible and repairable. Locating and determining size of damage by visual method is organizational maintenance. The types of materials used are shown on figure 1. Repair zones are shown on figure 2. Allowable damage limits within repair zones are listed in tables 1 and 2. Damage not listed or exceeding the following limits require depot engineering disposition.

3. **Negligible Damage.** Negligible damage is damage that may be allowed to exist as is. However, preventive maintenance, for temporary corrosion arrestment, should be done to scratches (NAVAIR 01-1A-509). The types and limits of damage are listed below and in table 1. The figure and index numbers in table 1 coincide with the figure and index numbers in the material index.

a. Scratches are not allowed within one diameter from the edge of any hole.

b. Smooth dents only, effective diameter at least 20 times the depth.

4. **Repairable Damage.** The types and limits of damage are listed below and in table 2. The figure and index numbers in table 2 coincide with figure and index numbers in the material index, figure 1.

5. **REPAIRS.** Types of repairs are temporary, one-time flight, permanent, critical area, alternate, and typical. Repair type definition are in structure repair terms (A1-F18AC-SRM-200, WP002 00).

6. Permanent Repairs.

7. Scratches, Nicks, Gouges, or Corrosion. Blend scratches, nicks, gouges, or corrosion (A1-F18AC-SRM-250, WP038 00). If after blending, the damage limits of table 2 are exceeded, repair aluminum sheet as below. Refinish blended areas (A1-F18AC-SRM-500, WP021 00).

a. Scratches - make crack or edge repairs.

b. Nicks, gouges, or corrosion - make hole or edge repair.

8. Cracks.

a. In zones A3 and A4, repair cracks free of structure or land areas in aluminum sheet (A1-F18AC-SRM-250, WP031 00) as below:

(1) Rout out crack in zone A3. Completely cut out crack in smallest diameter circle possible in zone A4.

(2) Install lap patch.

(3) Refinish repaired area (A1-F18AC-SRM-500, WP021 00).

b. In zones A3 and A4, repair cracks across structure or land areas in aluminum sheet (A1-F18AC-SRM-250, WP036 00) as below:

(1) Cut out damage.

(2) Install flush or lap patch.

(3) Refinish repaired area (A1-F18AC-SRM-500, WP021 00).

c. In repair zones A3 and A4, repair cracks to aluminum formed structure (A1-F18AC-SRM-250, WP033 00) as below:

(1) Cut out damage.

(2) Install angle or strap.

(3) Refinish repaired area (A1-F18AC-SRM-500, WP021 00).

9. Holes.

a. In zones A3 and A4, repair holes free of structure or land areas in aluminum sheet (A1-F18AC-SRM-250, WP031 00) as below:

(1) Cut out damage.

(2) Install flush or lap patch.

(3) Refinish repaired area (A1-F18AC-SRM-500, WP021 00).

b. In zones A3 and A4, repair holes across structure or land areas in aluminum sheet (A1-F18AC-SRM-250, WP036 00) as below:

(1) Cut out damage.

(2) Install flush or lap patch.

(3) Refinish repaired area (A1-F18AC-SRM-500, WP021 00).

c. In repair zones A3 and A4, repair holes to aluminum formed structure (A1-F18AC-SRM-250, WP033 00) as below:

(1) Cut out damage.

(2) Install angle or strap.

(3) Refinish repaired area (A1-F18AC-SRM-500, WP021 00).

10. Edge. In zone A3, repair edge damage in aluminum sheet (A1-F18AC-SRM-250, WP034 00) as below:

a. Cut out damage.

b. Install flush or lap patch.

c. Refinish repaired area (A1-F18AC-SRM-500, WP021 00).

11. Dents.

a. In zones A3 and A4, repair dents free of structure or land areas in aluminum sheet (A1-F18AC-SRM-250, WP031 00) as below:

(1) Cut out damage.

(2) Install flush or lap patch.

(3) Refinish repaired area (A1-F18AC-SRM-500, WP021 00).

b. In zones A3 and A4, repair dents across structure or land areas in aluminum sheet (A1-F18AC-SRM-250, WP036 00) as below:

(1) Cut out damage.

(2) Install flush or lap patch.

(3) Refinish repaired area (A1-F18AC-SRM-500, WP021 00).

c. In repair zones A3 and A4, repair dents to aluminum formed structure (A1-F18AC-SRM-250, WP033 00) as below:

(1) Cut out damage.

(2) Install angle or strap.

(3) Refinish repaired area (A1-F18AC-SRM-500, WP021 00).

12. **Chafing Repair for 74A350744 Plate Fasteners.** See figure 7. On aircraft F/A-18A 161353 thru 162852, repair will stop interference wearing between fasteners in 74A350744 plate and door CPB on canopy deck. After repair is completed, repair door CPB as required (WP036 00).

Support Equipment Required

None

Materials Required

Nomenclature	Specification or Part Number
Blind Rivet (10)	PLT1058-6-3
Blind Rivet (2)	PLT1058-6-5
Rivet (20)	NAS1097AD5
Sealing Compound	MIL-S-83430, Class A-1/2



Use care when drilling out fasteners not to elongate holes.

a. Drill out 32 existing fasteners at location shown.

b. Enlarge 12 holes for blind rivets to 0.199 +0.003 -0.000 inch diameter.

c. Countersink 32 holes to flushness requirement of fastener.

d. Deburr holes.

e. Clean up area.



Sealing Compound

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f. Prepare sealing compound (A1-F18AC-SRM-200, WP011 00).

g. Wet install PLT1058 blind rivets 12 places, using sealing compound (A1-F18AC-SRM-200, WP011 00).

h. Wet install NAS1097AD5 rivets 20 places, using sealing compound (A1-F18AC-SRM-200, WP011 00).

i. Apply finish system as required (A1-F18AC-SRM-500, WP021 00).

13. **REPLACEMENT.** For canopy structural component replacement, (WP005 02).

14. **CANOPY DECK, 74A350744, ADAPTION.** This procedure adapts old configuration canopy assemblies to new configuration. Certain replacement assemblies may require bushing to install wire bundle. Manufacture of bushing is intermediate level maintenance. See figure 8.

Support Equipment Required

None

Materials Required

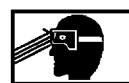
Nomenclature	Specification or Part Number
Rivet	NAS1097AD3
Rivet	NAS1097AD6
Sealing Compound	MIL-S-83430, Class A-1/2

NOTE

This procedure should be done before installation of canopy on aircraft, to minimize possibility of FOD in cockpit area.

a. Remove platenuts and rivets around hole.

b. Plug holes created by removal of platenuts with NAS1097AD6 and NAS1097AD3 rivets, length as required, double flush.



c. Manufacture bushing and washer.

Sealing Compound

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d. Apply chemical treatment (A1-F18AC-SRM-500, WP008 00).

e. Wet install bushing and washer with sealing compound.

Table 1. Negligible Damage Limits

Fig No Idx No	Nomen/ Repair Zone	Thickness	Scratch Depth	Nicks Gouges		Dents Depth	Rivet Tilt
				Depth	Area		
Fig 1 (1)	Arch Zone A4	All areas	0.0006	0.0006	100%		0%
Fig 1 (4)	Beam Zone A4	0.050	0.0006	0.0006	100%	0.025	N/A
		0.070	0.0006	0.0006	100%	0.035	N/A
		0.100	0.0006	0.0006	100%	0.050	N/A
Fig 1 (6)	Support Zone B4	All areas	0.0006	0.0006	100%		N/A
	Zone C4	All areas	0.0006	0.0006	100%		N/A
Fig 1 (7)	Beam Zone A4	0.070	0.0006	0.0006	100%	0.035	N/A
		0.090	0.0006	0.0006	100%	0.045	N/A
		0.120	0.0006	0.0006	100%	0.045	N/A
Fig 1 (10)	Bulkhead Zone A4	0.050	0.0006	0.0006	100%	0.025	N/A
Fig 1 (11)	Intercostal Zone B4	0.060	0.0006	0.0006	100%	0.03	N/A
	Zone C4	0.080	0.0006	0.0006	100%		N/A
Fig 1 (12)	Beam Zone A4	All areas	0.0006	0.0006	100%	0.035	N/A
	Zone B4	0.160	0.0006	0.0006	100%	0.05	N/A
Fig 1 (16)	Angle Zone A3	0.040	0.002	0.002	100%	0.02	N/A
Fig 1 (17)	Intercostal Zone A3	0.032	0.002	0.002	100%	0.016	N/A
Fig 1 (18)	Intercostal Zone A3	0.032	0.002	0.002	100%	0.016	N/A
Fig 1 (19)	Intercostal Zone A3	0.032	0.002	0.002	100%	0.016	N/A

Table 1. Negligible Damage Limits (Continued)



Fig No Idx No	Nomen/ Repair Zone	Thickness	Scratch Depth	Nicks Gouges		Dents Depth	Rivet Tilt
				Depth	Area		
Fig 1 (20)	Support Zone A3	0.040	0.002	0.002	100%	0.02	N/A
Fig 1 (21)	Intercostal Zone A3	0.032	0.002	0.002	100%	0.016	N/A
Fig 1 (22)	Intercostal Zone A3	0.050	0.002	0.002	100%	0.025	N/A
Fig 1 (23)	Intercostal Zone A3	0.050	0.002	0.002	100%	0.025	N/A
Fig 1 (24)	Intercostal Zone A3	0.050	0.002	0.002	100%	0.025	N/A
Fig 1 (25)	Intercostal Zone A3	0.032	0.002	0.002	100%	0.016	N/A
Fig 1 (26)	Intercostal Zone A3	0.032	0.002	0.002	100%	0.016	N/A
Fig 1 (28)	Intercostal Zone A3	0.032	0.002	0.002	100%	0.016	N/A
Fig 1 (29)	Fairing Zone A3	0.025 0.063	0.002 0.002	0.002 0.002	100% 100%	0.0125 0.0315	5% 5%
Fig 1 (30)	Frame Zone A4	All areas	0.006 	0.0006	100%		N/A
Fig 1 (31)	Guide Zone A4	0.070	0.0006	0.0006	100%	0.035	N/A
Fig 1 (34)	Angle Zone A4	0.050	0.0006	0.0006	100%	0.025	N/A
Fig 1 (35)	Support Zone A3	0.040	0.002	0.002	100%	0.020	N/A
Fig 1 (36)	Angle Zone A4	0.040	0.0006	0.0006	100%	0.020	N/A
Fig 1 (38)	Retainer Zone A3	All areas	0.002	0.002	100%	0.03	N/A
Fig 1 (44)	Support Zone A4	0.040	0.0006	0.0006	100%	0.02	N/A

Table 1. Negligible Damage Limits (Continued)





Fig No Idx No	Nomen/ Repair Zone	Thickness	Scratch Depth	Nicks Gouges		Dents Depth	Rivet Tilt
				Depth	Area		
Fig 1 (45)	Hinge Zone A4	All areas	0.0006	0.0006	100%		N/A
Fig 1 (46)	Intercostal Assembly Zone A4	0.050	0.0006	0.0006	100%	0.025	N/A
Fig 1 (47)	Plate Zone A4	0.063	0.0006	0.0006	100%	0.0315	N/A
Fig 1 (48)	Beam Assembly Zone A4	0.063	0.0006	0.0006	100%	0.031	N/A
Fig 1 (49)	Retainer Zone A3	All areas	0.002	0.002	100%	0.03	N/A
Fig 1 (51)	Retainer Zone A3	All areas	0.002	0.002	100%	0.03	N/A
Fig 1 (52)	Angle Zone A4	0.040	0.0006	0.0006	100%	0.020	N/A
Fig 1 (53)	Angle Zone A4	0.040	0.0006	0.0006	100%	0.020	N/A
NOTES  Inspect sub-structure for damage.  Except for noted area.  None allowed.							

Table 2. Repairable Damage Limits After Blending

Fig No Idx No	Nomen/ Repair Zone	Thickness	Scratch Depth	Nicks Gouges		Corrosion	
				Depth	Area	Depth	Area
Fig 1 (1)	Arch Zone A4	All areas	0.016	0.016	15%	0.016	15%
Fig 1 (4)	Beam Zone A4	0.050	0.010	0.010	5%	0.010	5%
		0.070	0.014	0.014	5%	0.014	5%
		0.100	0.020	0.020	5%	0.020	5%

Table 2. Repairable Damage Limits After Blending (Continued)






Fig No Idx No	Nomen/ Repair Zone	Thickness	Scratch Depth	Nicks Gouges		Corrosion	
				Depth	Area	Depth	Area
Fig 1 (6)	Support Zone B4 Zone C4	All areas All areas	0.016 0.0006	0.016 0.0006	5% 100%	0.016 0.0006	5% 100%
Fig 1 (7)	Beam Zone A4	0.070 0.090 0.120	 0.018 0.018	 0.018 0.018	 10% 10%	 0.018 0.018	 10% 10%
Fig 1 (10)	Bulkhead Zone A4	0.050	0.010	0.010	5%	0.010	5%
Fig 1 (11)	Intercostal Zone B4 Zone C4	0.060 0.080	0.012 0.016	0.012 0.016	10% 10%	0.012 0.016	10% 10%
Fig 1 (12)	Beam Zone A4 Zone B4	All areas 0.160	0.014 0.020	0.014 0.020	10% 5%	0.014 0.020	10% 5%
Fig 1 (16)	Angle Zone A3	0.040	0.008	0.008	15%	0.008	15%
Fig 1 (17)	Intercostal Zone A3	0.032	0.006	0.006	15%	0.006	15%
Fig 1 (18)	Intercostal Zone A3	0.032	0.006	0.006	15%	0.006	15%
Fig 1 (19)	Intercostal Zone A3	0.032	0.006	0.006	15%	0.006	15%
Fig 1 (20)	Support Zone A3	0.040	0.008	0.008	15%	0.008	15%
Fig 1 (21)	Intercostal Zone A3	0.032	0.006	0.006	15%	0.006	15%
Fig 1 (22)	Intercostal Zone A3	0.050	0.010	0.010	15%	0.010	15%
Fig 1 (23)	Intercostal Zone A3	0.050	0.010	0.010	15%	0.010	15%
Fig 1 (24)	Intercostal Zone A3	0.050	0.010	0.010	15%	0.010	15%
Fig 1 (25)	Intercostal Zone A3	0.032	0.006	0.006	15%	0.006	15%

Table 2. Repairable Damage Limits After Blending (Continued)







Fig No Idx No	Nomen/ Repair Zone	Thickness	Scratch Depth	Nicks Gouges		Corrosion	
				Depth	Area	Depth	Area
Fig 1 (26)	Intercostal Zone A3	0.032	0.006	0.006	15%	0.006	15%
Fig 1 (28)	Intercostal Zone A3	0.032	0.006	0.006	15%	0.006	15%
Fig 1 (29)	Fairing Zone A3	0.025	0.005	0.005	15%	0.005	15%
		0.063	0.013	0.012	15%	0.012	15%
Fig 1 (30)	Frame Zone A4	All areas	0.020	0.020	15%	0.020	15%
Fig 1 (31)	Guide Zone A4	0.070	0.014	0.014	15%	0.014	15%
Fig 1 (34)	Angle Zone A4	0.050	0.010	0.010	10%	0.010	10%
Fig 1 (35)	Support Zone A3	0.040	0.008	0.008	10%	0.008	10%
Fig 1 (36)	Angle Zone A4	0.040	0.008	0.008	10%	0.008	10%
Fig 1 (38)	Retainer Zone A3	All areas	0.012	0.012	15%	0.012	15%
Fig 1(44)	Support Zone A4	0.040	0.008	0.008	15%	0.008	15%
Fig 1 (45)	Hinge Zone A4	Mouth	0.030	0.030	15%	0.030	15%
		All areas except mouth	0.020	0.020	15%	0.020	15%
Fig 1 (46)	Intercostal Assembly Zone A4	0.050	0.010	0.010	10%	0.010	10%
Fig 1 (47)	Plate Zone A4	0.063	0.0126	0.012	10%	0.012	10%
Fig 1(48)	Beam Assembly Zone A4	0.063					
Fig 1 (49)	Retainer Zone A3	All areas	0.012	0.012	15%	0.012	15%

Table 2. Repairable Damage Limits After Blending (Continued)

Fig No Idx No	Nomen/ Repair Zone	Thickness	Scratch Depth	Nicks Gouges		Corrosion	
				Depth	Area	Depth	Area
Fig 1 (51)	Retainer Zone A3	All areas	0.012	0.012	15%	0.012	15%
Fig 1 (52)	Angle Zone A4	0.040	0.008	0.008	10%	0.008	10%
Fig 1(53)	Angle Zone A4	0.040	0.008	0.008	10%	0.008	10%
NOTE  None allowed.							

15. **ACRYLIC TRANSPARENCY.****NOTE**

Before evaluating damage, make sure transparency is thoroughly cleaned (A1-F18AC-PCM-000).

16. **DAMAGE EVALUATION.** Damage is classified as negligible and repairable. Damage criteria is applicable to inner and outer surface of transparency. To determine if damage is negligible or repairable, an optical inspection is required. Damage not listed or exceeding the following limits require depot engineering disposition.

NOTE

During installation of edging strips, transparency is masked approximately 1/8 to 1/4 inch from area receiving edging strip. When edging strips are bonded to transparency, pressure is applied to force out air bubbles and a thin line of adhesive may exist due to squeeze out. When cured, this adhesive line may appear running approximately 1/8 to 1/4 inch from edging strips around periphery of inner and/or outer mold line surface of transparency. Hanging of fingernail may occur on this adhesive line and should not be identified as scratch or cut in transparency. This adhesive line does not require removal and is acceptable to remain on transparency. See figure 3.

17. **Optical Inspection.**

- a. Assume pilot's position in cockpit.

NOTE

For best distortion inspection, a grid board with lines one-sixteenth of an inch wide on 1 inch centers, located approximately 15 feet from pilot's eye position, may be used.

- b. Look up, down, and side to side through transparency at grid board or an object at least 30 feet away which has distinct straight line construction.

- c. Slowly move head sideways and up and down while viewing the grid board or object through the transparency.

- d. Make note of any distortion, scratches, stains, streaks, and pitting that cause vision impairment.

18. **Negligible Damage.** Negligible damage is damage that may be allowed to exist as is. Types and limits are:

- a. Minor distortion, stains, and streaks.
- b. Pilot's vision is not obstructed by, or drawn to the defect.

NOTE

The term "minor crazing" limits the depth of the cracks to 0.030 inch, and the total length of the crazing to 18 inches, with allowable gaps (uncrazed transparency) of up to 2.0 inches.

- c. Localized distortion (bull's eye), or minor crazing within one inch of the edging strip.

d. Slight, gradual bending of a straight line element of the grid board or object used in optical inspection.

NOTE

Superficial scratches normally only need to be cleaned and have rain repellent applied (A1-F18AC-PCM-000).

e. Superficial scratches that do not positively hang a fingernail on the edge.

19. **Repairable Damage.** Repairable damage is damage that can be permanently repaired with no adverse affect on structural integrity, flight characteristics, or safety of the aircraft. Damage types and limits are:

a. Abrupt slope reversal of a straight line element of the grid board or object used in optical inspection.

b. Jumping or abrupt movement of a straight line element of the grid board or object used in optical inspection.

c. Vision impairment, defined as a condition which causes the observer to focus on the defect instead of a straight line element of the grid board or object used in optical inspection.

d. Scratches, nicks, and gouges having sharp enough edges to positively cause hanging of a fingernail.

e. Cleaning damage and gun gas erosion consisting of hoopwise scratches or pitting causing unacceptable clarity or optical definition through the transparency.

f. Damage as described in step d, within one-eighth of an inch of edging strip is unacceptable and will require an engineering disposition.

20. REPAIRS.

21. **Acrylic Transparency Polishing.** See figure 4. Damage to transparency is repaired by polishing if thickness limits can be maintained and optic quality can be restored. To determine the depth of a defect and thickness of transparency, a universal optical micrometer kit should be used before and after each repair.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Universal Optical Micrometer Kit	966A1

Materials Required

Nomenclature	Specification or Part Number
Anti Static Cream	3MASC8
Cloth, Abrasive	1500 Micro-Mesh
Cloth, Abrasive	1800 Micro-Mesh
Cloth, Abrasive	12000 Micro-Mesh
Isopropyl Alcohol	TT-I-735, Grade B
Maintenance Kit	MIL-M-58091
Micro Gloss Abrasive Cream	-
Plastic Cleaner	P-P-560

NOTE

Mechanic's technique and depth and nature of the defect will have an impact on time intervals required for each polishing step.

Transitions in thickness must be gradual to avoid visual distortion. Spread out each blend area. The deeper the defect, the larger the blend area. The initial defect removal shall be accomplished over an extensive area and each successive step shall be blended over a progressively larger area.

For defects located within 1 inch of the edge strips, try to limit the area of polishing to that within 1 inch of the edge strips.

a. Before repairing any damage, make sure transparency is thoroughly cleaned (A1-F18AC-PCM-000).

b. Measure thickness of transparency using a universal optical micrometer (T.O. 33B4-2-10-1). Multiply all measured dimensions by a correction factor of 1.5 for stretched acrylic to obtain actual thickness. If thickness is less than 0.180-inch, transparency must be replaced.



Remove all objects such as rings, watches, belt buckles, and other items which may damage transparency.

Only hand polishing is allowed when working transparency. Use of power sanding and buffing equipment is prohibited.

c. There are thirteen principal steps to completely polish a major defect area in a transparency. The procedure may start at any step.

NOTE

The starting grit selected should be one which leaves a scratch depth close to the defect depth.

d. Start with the finer grits and proceed to the coarser grits until the correct starting grit is determined.

e. Remove the defect using the starting grit selected.

f. All steps following the starting grit selected must be completed in order to remove polishing marks left by the previous abrasive.

g. The following is a list of steps used in transparency polishing:

NOTE

Steps 1, 2, and 3 must be performed wet.

(1) STEP 1 uses 400 grit abrasive paper around a neoprene form block with water. Use fore and aft strokes.

(2) Thoroughly clean transparency with water.

(3) STEP 2 uses 600 grit abrasive paper around a neoprene form block with water. Use fore and aft strokes for approximately 3 minutes per square foot.

(4) Thoroughly clean transparency with water.

(5) STEP 3 uses 1500 (purple) micro-mesh cloth around a neoprene form block with water. Use fore and aft strokes for approximately 3 minutes per square foot.

(6) Thoroughly clean transparency with water.

NOTE

Polishing steps 4 through 11 can be performed wet or dry. It is easier to see progress of the surface restoration if the micro-mesh cloth is dry. The powdered particles of the transparency settle into the scratches and appear as white streaks. These streaks are easily seen and polishing is continued until the streaks are removed.

(7) STEP 4 uses 1800 (pink) micro-mesh cloth around a neoprene form block. Use fore and aft strokes for approximately 3 minutes per square foot.

(8) Thoroughly clean transparency with water.

NOTE

When using the dry procedure, frequently slap the micro-mesh cloth with your hand to loosen the abraded, powdered acrylic particles from the cloth.

(9) STEP 5 uses 2400 (white) micro-mesh cloth around a neoprene form block. Use fore and aft strokes applying medium pressure for approximately 3 minutes per square foot.



Plastic Cleaner

14

(10) Thoroughly clean transparency with clean cloth and plastic cleaner using fore and aft strokes. Dry the surface with clean, dry cloth.

(11) STEP 6 uses 3200 (blue) micro-mesh cloth around a neoprene form block. Use fore and aft strokes for approximately 2 minutes per square foot.

NOTE

The 3200 micro-mesh cloth used in STEP 6 leaves a finer scratch pattern than the 2400 micro-mesh cloth used in STEP 5.

(12) Thoroughly clean transparency with clean cloth and plastic cleaner using fore and aft strokes. Dry the surface with clean, dry cloth.

(13) STEP 7 uses 3600 (green) micro-mesh cloth around a neoprene form block. Use fore and aft strokes for approximately 2 minutes per square foot.

(14) Thoroughly clean transparency with clean cloth and plastic cleaner using fore and aft strokes. Dry the surface with clean, dry cloth.

(15) STEP 8 uses 4000 (yellow) micro-mesh cloth around a neoprene form block. Use fore and aft strokes for approximately 2 minutes per square foot.

NOTE

The 4000 micro-mesh cloth used in STEP 8 will leave a very fine scratch pattern after polishing.

(16) Thoroughly clean transparency with clean cloth and plastic cleaner using fore and aft strokes. Dry the surface with clean, dry cloth.

(17) STEP 9 uses 6000 (gold) micro-mesh cloth around a neoprene form block. Use fore and aft strokes for approximately 1-1/2 minutes per square foot.

(18) Thoroughly clean transparency with clean cloth and plastic cleaner using fore and aft strokes. Dry the surface with clean, dry cloth.

NOTE

No scratch pattern should remain on the surface of transparency after STEP 9. A hazed appearance should appear.

(19) STEP 10 uses 8000 (maroon) micro-mesh cloth around a neoprene form block. Use fore and aft strokes for approximately 1-1/2 minutes per square foot, except if the area being worked exhibits a pattern effect in fore and aft direction from previous polishing operations. Then use alternating 15 second intervals of vertical hoop strokes and horizontal fore and aft strokes to remove the pattern. Use very light pressure on this step.

(20) Thoroughly clean transparency with clean cloth and plastic cleaner using fore and aft strokes. Dry the surface with clean, dry cloth.

(21) STEP 11 uses 12000 (gray) micro-mesh cloth around a neoprene form block. Use fore and aft strokes for

approximately 1-1/2 minutes per square foot, except if the area being worked exhibits a pattern effect in fore and aft direction from previous polishing operations. Then use alternating 15 second intervals of vertical hoop strokes and horizontal fore and aft strokes to remove the pattern. Use very light pressure on this step.

(22) Thoroughly clean transparency with clean cloth and plastic cleaner using fore and aft strokes. Dry the surface with clean, dry cloth.



Abrasive Cream

15

(23) STEP 12 uses micro clear abrasive cream. Mix approximately one part of cream with four parts clean water. Thoroughly shake the cream mixture before use. Put mixture on clean cotton cloth previously dampened with clean water. Use fore and aft strokes for approximately one minute per square foot.

(24) Clean transparency with clean cotton cloth moistened with clean water. Dry the surface with clean, dry cotton cloth.



Anti Static Cream

16

(25) STEP 13 uses anti-static cream. Apply a thin film to transparency surface using fore and aft strokes. Hand buff the transparency dry with clean, dry cotton cloth using fore and aft strokes.

(26) Apply rain repellent coating (A1-F18AC-PCM-000).

(27) Measure thickness of transparency using universal optical micrometer (T.O. 33B4-2-10-1). Multiply all measured dimensions by a correction factor of 1.5 for stretched acrylic to obtain actual thickness. If thickness is less than 0.180-inch, transparency must be replaced.

(28) Perform optical inspection procedure in paragraph 16. If any defect is visible, repeat whatever steps are necessary to eliminate the defect.

22. **Edging Strip Repair.** Phenolic edging strips were installed on aircraft F/A-18A 161353 thru 162414. Erosion of phenolic strips may occur as a result of wind, rain, or hail. Damage that is less than 50 percent of edging strip thickness is repaired by filling damage and installing repair strap per paragraph 23. Damage that is more than 50 percent of edging strip thickness is repaired by removing existing phenolic edging strip and installing a metal edging strip per paragraph 24.

23. Damage Less Than 50 Percent of Edging Strip Thickness. See figure 5.

Support Equipment Required

Nomenclature	Part Number or Type Designation
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Torque Wrench, 0 to 60 Inch-Pounds	-
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Materials Required

Nomenclature	Specification or Part Number
Adhesive	EA9321 A/B
Bolt (37)	NAS663V11HT
Bolt (4)	NAS663V14HT
Cheesecloth	CCC-C-440, Type 1, Class 1
Cleaning Compound	PR146 Blue
Cloth, Nylon Scrim	Pattern 30
Filler Washer (41)	4M119D6
Isopropyl Alcohol	TT-I-735, Grade A
Paper, Abrasive	A-A-1047 Grit 240-9x11, Grit 320-9x11
Primer, Adhesive	PR142
Sealing Compound	PR-1725, B-2
Tape, Pressure Sensitive	855-1.000 inch

a. Mask transparency next to phenolic edging strip.

b. Remove 41 fasteners where transparency attaches to canopy arch.



Use care not to sand into acrylic transparency while removing damaged fibers.

c. Remove any erosion damage, delaminations, or extruding fibers by sanding with 240 grit abrasive paper.



Isopropyl Alcohol

2

d. Clean damaged area using clean cheesecloth moistened with isopropyl alcohol.



Adhesive

17

e. Prepare EA9321 A/B adhesive (A1-F18AC-SRM-200, WP011 00).

f. Fill damaged area to edging strip mold line with adhesive adding excess adhesive to allow for shrinkage.

g. Cure adhesive (A1-F18AC-SRM-200, WP011 00).



Use care not to sand into acrylic transparency causing damage.

h. Sand repair area flush with edging strip mold line using 240 grit abrasive paper.

i. Bond 4M119D6 filler washers in all countersinks using EA9321 A/B adhesive.

j. Fabricate repair strap per figure 5.

k. Clean repair strap by wiping with clean cheesecloth moistened with isopropyl alcohol.

l. Abrade bonding surface of repair strap to a satin finish using 320 grit abrasive paper.

m. Clean bonding surface of repair strap with clean, dry cheesecloth.



Cleaning Compound

18

n. Use a clean, dry cheesecloth to apply a thin coat of PR146 Blue cleaning compound to bonding surface of repair strap.

o. Clean phenolic edging strip with clean cheesecloth moistened with isopropyl alcohol.

p. Abrade bonding surface of phenolic edge strip using 320 grit abrasive paper.

q. Remove sanding dust by wiping with clean, dry cheesecloth.



Adhesive Primer

19

r. Use a clean, dry cheesecloth to apply a thin coat of primer adhesive to area on phenolic edging strip where repair strap will be installed.



Sealing Compound

20

s. Prepare sealing compound (A1-F18AC-SRM-200, WP011 00).

t. Apply a thin coat of sealing compound to surfaces being bonded.

u. Install scrim cloth between bonding surfaces to control bond line thickness.

v. Position repair strap on phenolic edging strip.



Use care not to tighten clamps excessively. Damage to transparency may result.

w. Install clamps applying sufficient pressure to force out air and excessive sealing compound.

x. Remove excessive sealing compound with cheesecloth dampened with isopropyl alcohol.

y. Cure sealing compound for 25 hours before removing clamps.



Use extreme care when back drilling not to damage holes in acrylic transparency.

z. Back drill 0.195 +0.007 -0.000 inch diameter holes in repair strap 41 places, using existing holes in 74A350701 arch as guide.

aa. Countersink holes in repair strap to flushness requirement of fastener.

ab. Wet install fasteners using sealing compound 41 places, detail F (A1-F18AC-SRM-200, WP011 00).

ac. Torque fasteners to 30-35 inch-pounds.

ad. Apply finish system as required (A1-F18AC-SRM-500, WP021 00).

24. Damage More Than 50 Percent of Edging Strip Thickness. See figure 6.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Torque Wrench, 0 to 60 Inch-Pounds	-

Materials Required

Nomenclature	Specification or Part Number
Cheesecloth	CCC-C-440, Type 1, Class 1
Cleaning Compound	PR146 Blue
Cloth, Nylon Scrim	Pattern 30
Edging Strip	74A350635-2003
Isopropyl Alcohol	TT-I-735, Grade A
Paper, Abrasive	A-A-1047 Grit 240-9x11, Grit 320-9x11
Primer, Adhesive	PR142
Sealing Compound	PR-1725, B-2
Tape, Pressure Sensitive	855-1.000 inch

a. Mask transparency next to phenolic edging strip.

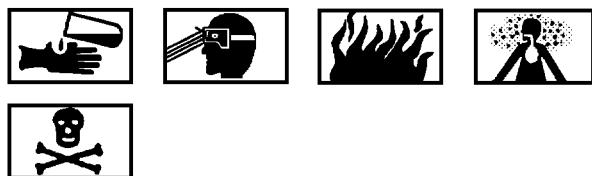
b. Remove 45 fasteners where transparency attaches to canopy arch and corner frame.

c. Remove damaged phenolic edging strip by peeling from acrylic transparency.



Use care not to sand into acrylic transparency while removing residual adhesive and/or phenolic fibers.

d. Remove any residual adhesive and/or phenolic edging strip by lightly sanding surface with 240 grit abrasive paper.



Isopropyl Alcohol

2

e. Clean area where phenolic edging strip was removed using clean cheesecloth moistened with isopropyl alcohol.

f. Abrade bonding surface of 74A350635 edging strip to a satin finish using 320 grit abrasive paper.

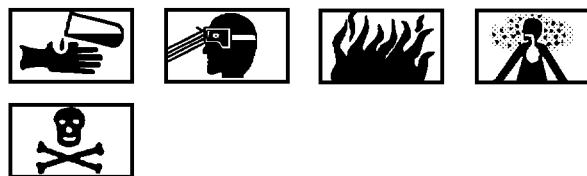
g. Clean bonding surface of edging strip with a clean, dry cheesecloth.



Cleaning Compound

18

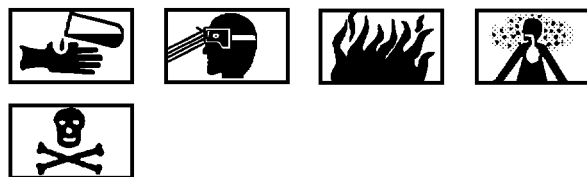
h. Use a clean, dry cheesecloth to apply a thin coat of PR146 Blue cleaning compound to bonding surface of edging strip.



Adhesive Primer

19

i. Use a clean, dry cheesecloth to apply a thin coat of primer adhesive to area on acrylic transparency where edging strip will be installed.



Sealing Compound

20

j. Prepare sealing compound (A1-F18AC-SRM-200 WP011 00).

k. Apply a thin coat of sealing compound to surfaces being bonded.

l. Install scrim cloth between bonding surfaces to control bond line thickness.

m. Position edging strip on acrylic transparency.



Use care not to tighten clamps excessively. Damage to transparency may result.

n. Install clamps applying sufficient pressure to force out air and excessive sealing compound.

o. Remove excessive sealing compound with cheesecloth dampened with isopropyl alcohol.

p. Cure sealing compound for 25 hours before removing clamps.

q. If gap at end of edging strip exceeds 0.06 inch:

(1) Prepare sealing compound (A1-F18AC-SRM-200, WP011 00).

(2) Fill in gaps to edging strip mold line with sealing compound.

(3) Cure sealing compound for 25 hours.



Use extreme care when back drilling not to damage holes in acrylic transparency.

r. Back drill 0.195 +0.007 -0.000 inch diameter holes in edging strip 45 places, using existing holes in 74A350701 arch and 74A350711 corner frame.

s. Countersink holes in edging strip to flushness requirement of fastener.

t. Wet install fasteners using sealing compound 45 places, detail C (A1-F18AC-SRM-200, WP011 00).

u. Torque fasteners to 30-35 inch-pounds.

v. Apply finish system as required (A1-F18AC-SRM-500, WP021 00).

25. **REPLACEMENT.** For acrylic transparency replacement, (WP005 03).

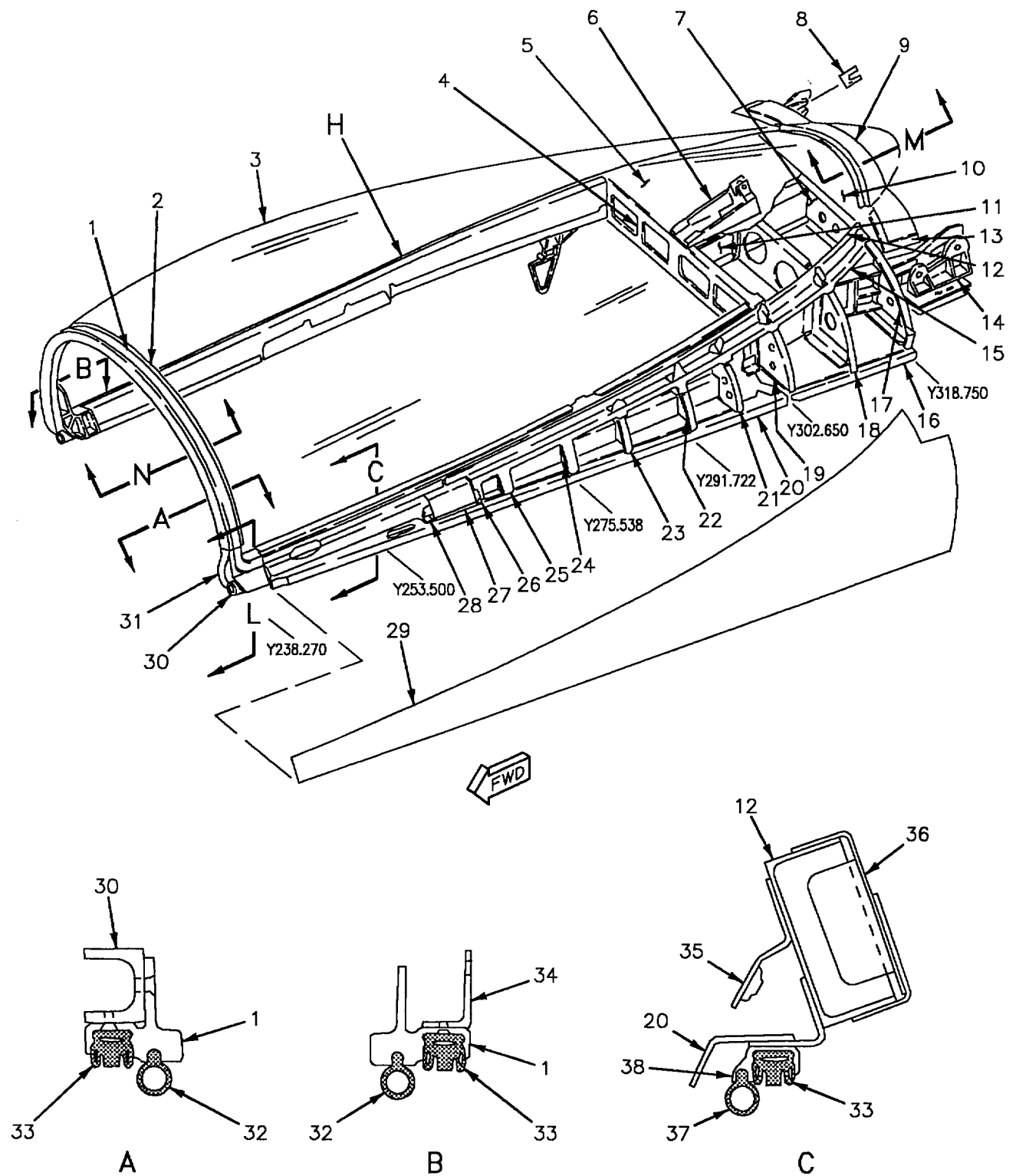


Figure 1. Material Index (Sheet 1)

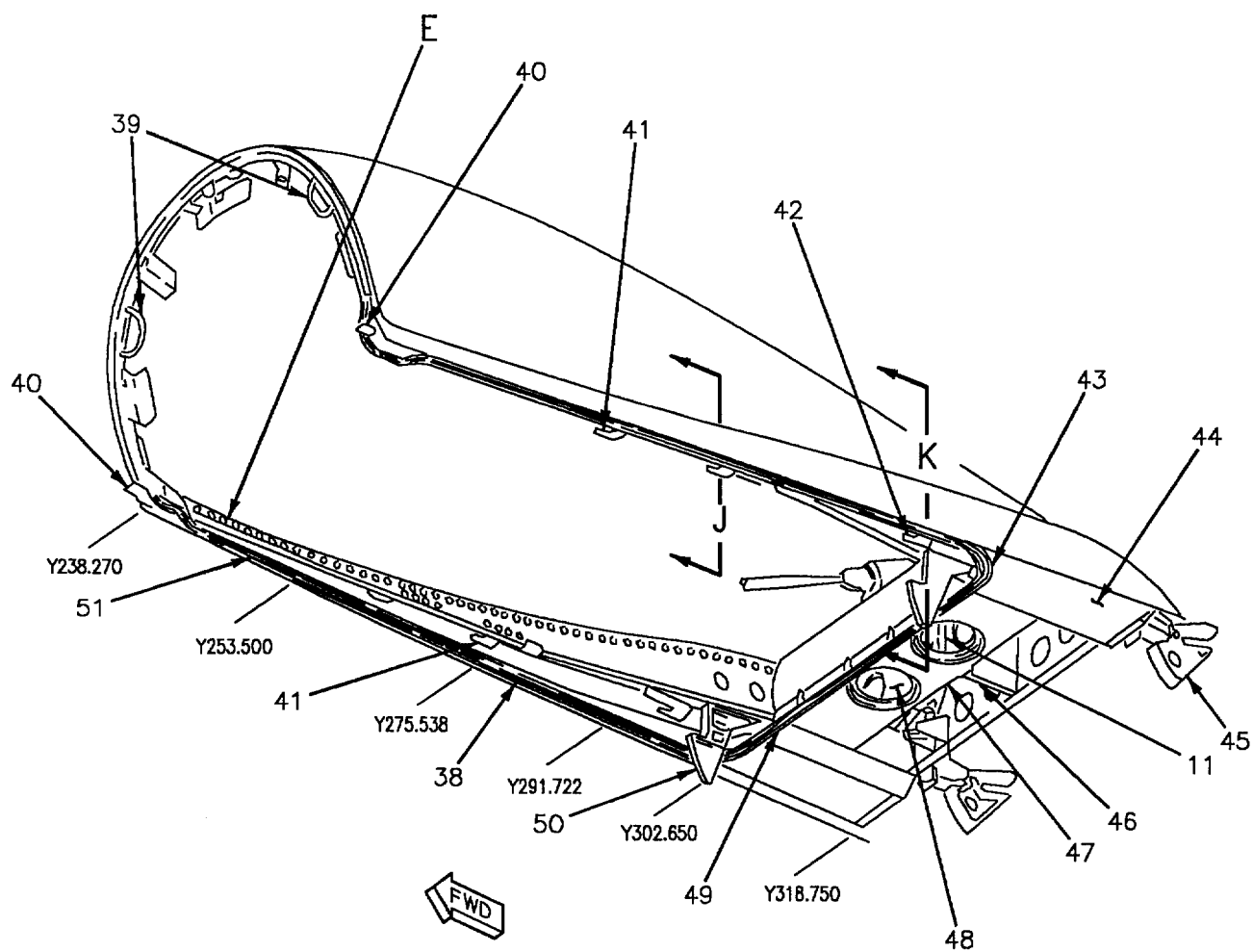


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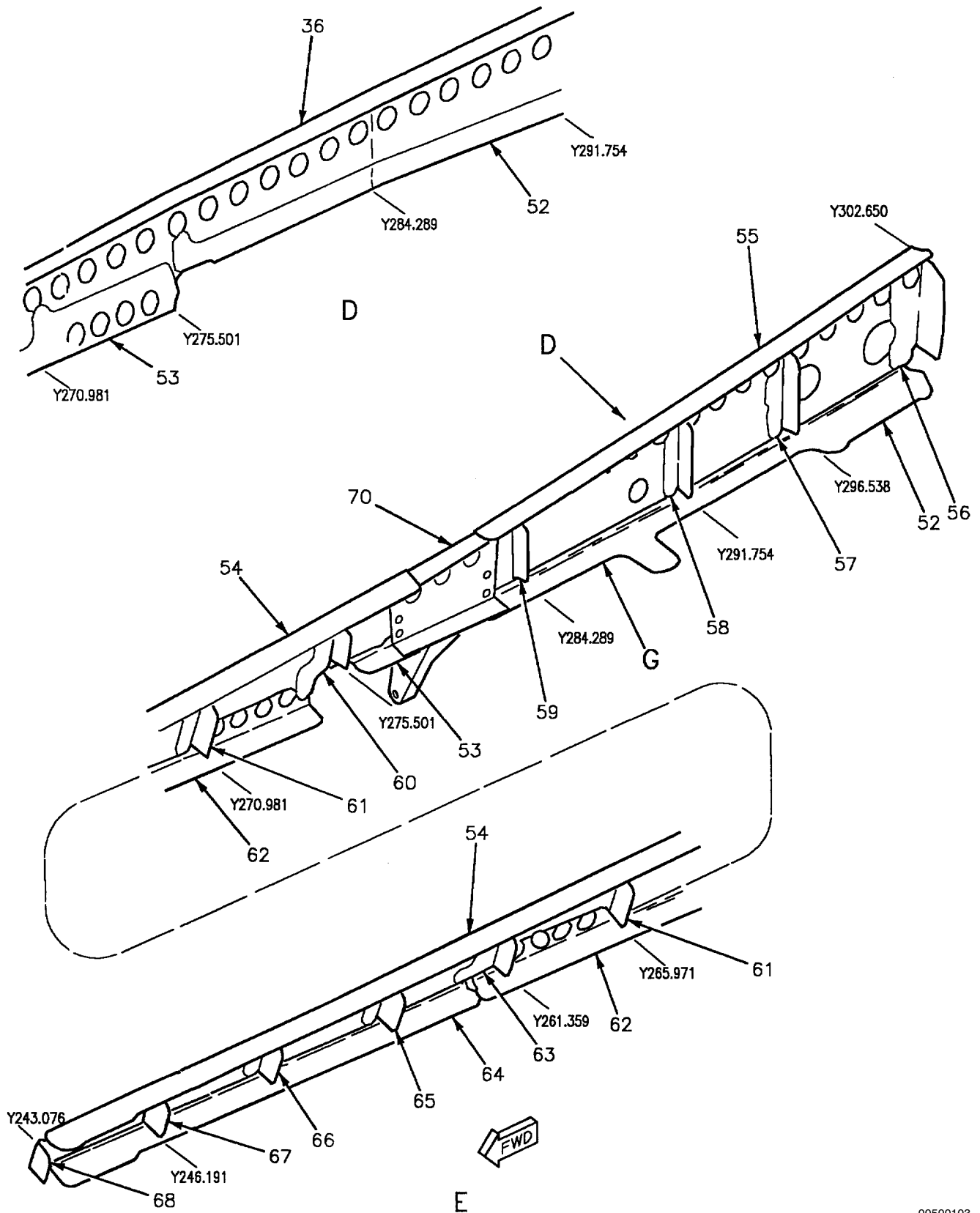


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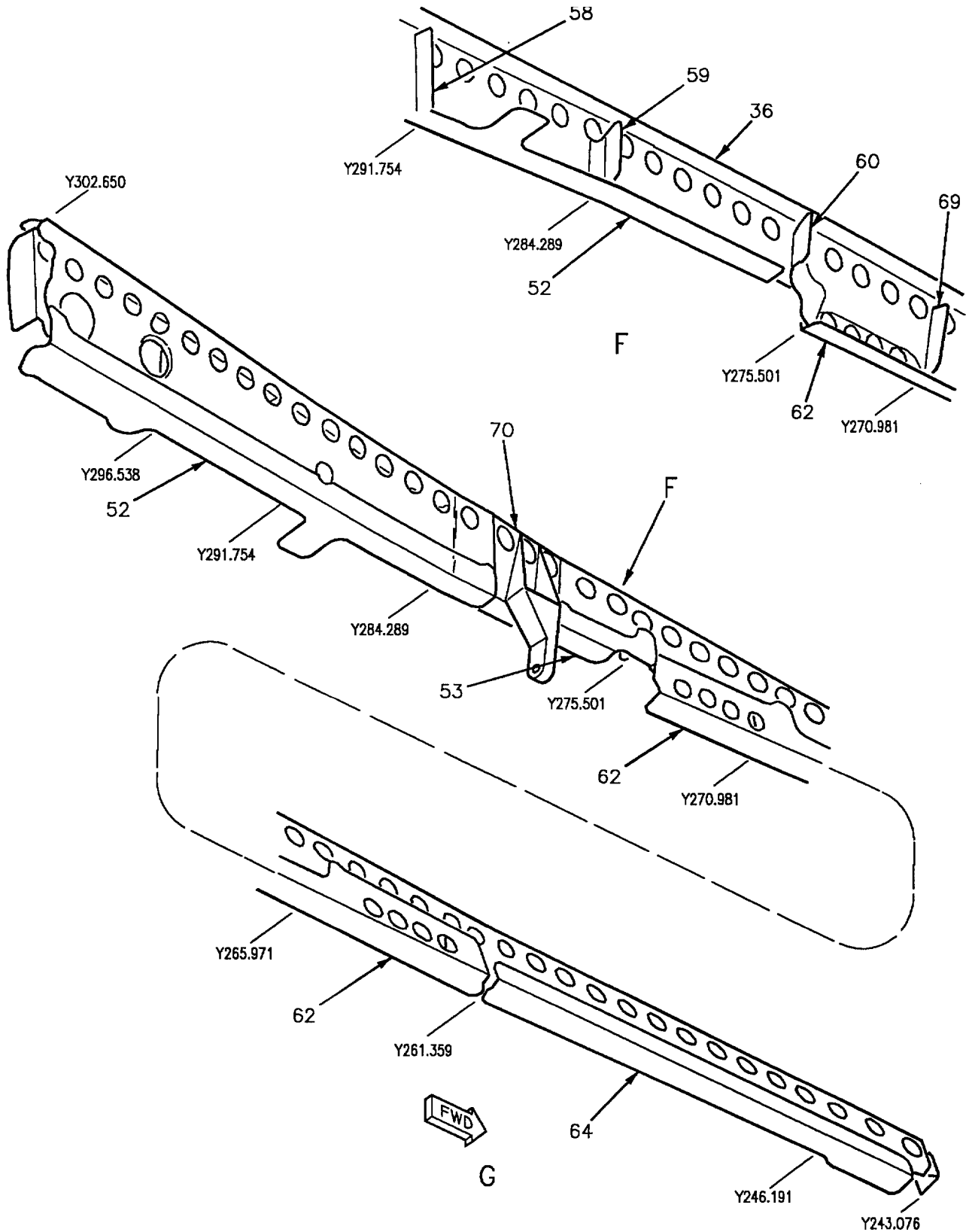


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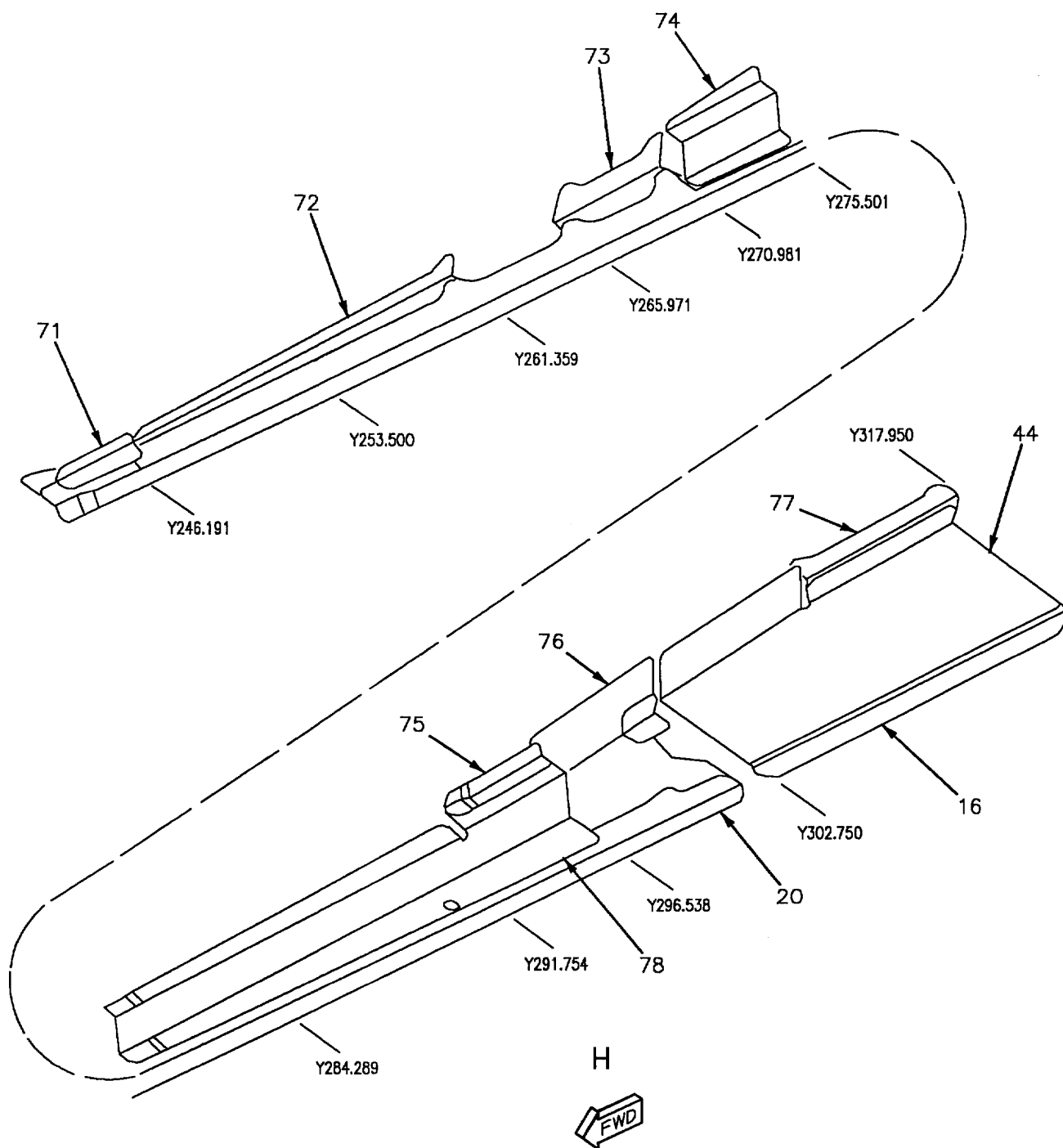


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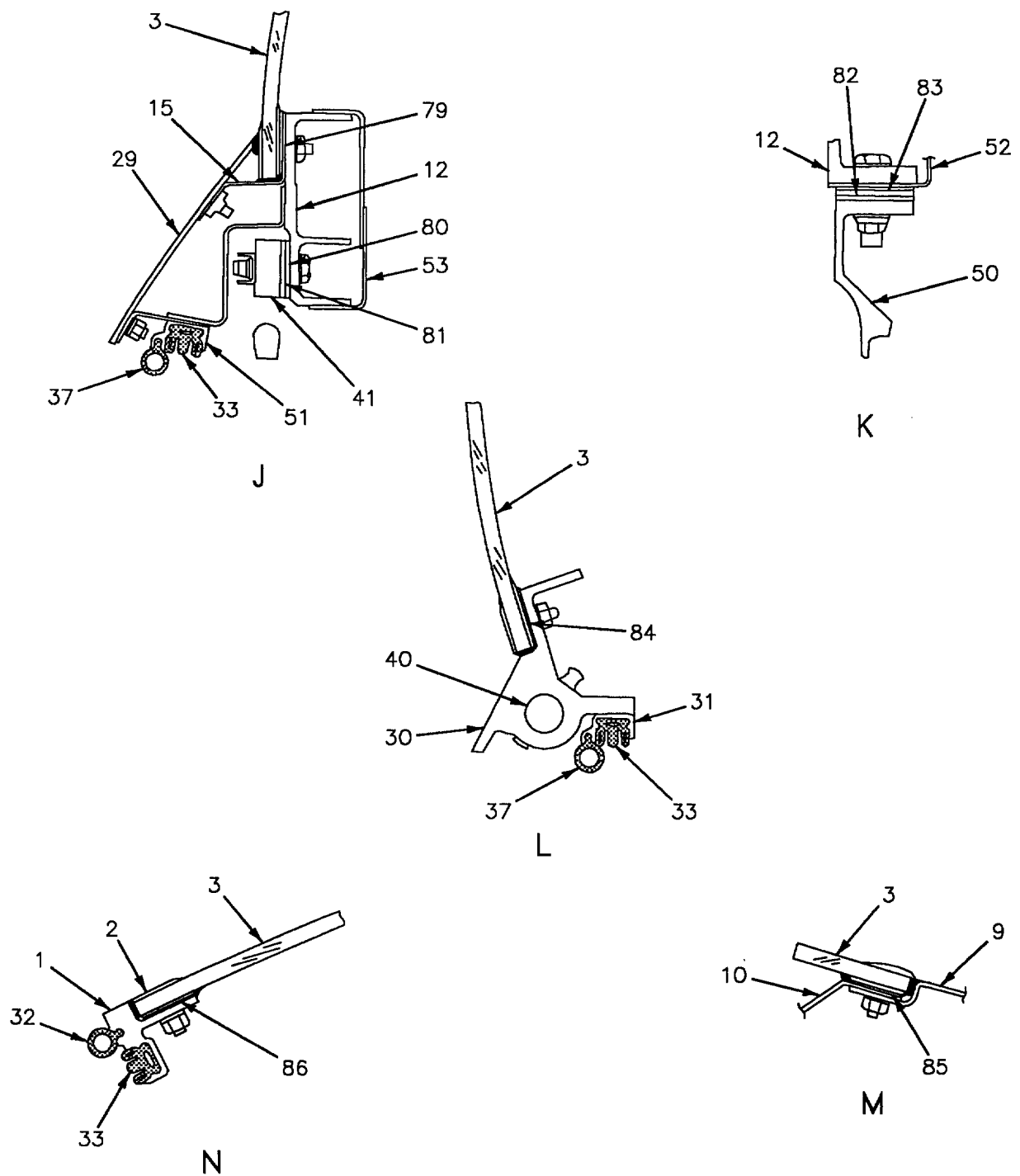


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








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1		Arch 74A350701-2007	1MA10322D01 Extr	7075-T73 Al Aly
2		Edging Strip 74A350635-2003	0.050 Sheet	6061-T6 Al Aly
3	 	Canopy Panel 74A350700-1001 74A350700-1003	0.300 Sheet	Stretched Acrylic
4		Beam 74A350734-2001	1MA10325D06 Extr	7075-T76511 Al Aly
5		Plate 74A350744-2018, -2019	0.125 Plate	7075-T6 Alclad
6	 	Support 74A350748-2003 74A350748-9001	Pressing	7075-T73 Al Aly
7		Beam 74A350735-2003	Pressing	7075-T73 Al Aly
8	 	Stop 74A350773-1001 74A350774-2001	0.080 Sheet 3.50 Plate	301 CRES Al Bronze Aly
9		Fairing 74A350722-2011	0.063 Sheet	7075-T6 Alclad
10		Bulkhead 74A350745-2001	0.050 Sheet	7075-T6 Alclad
11		Intercostal 74A350736-2001	2.25 Plate	7075-T7351 Al Aly
12		Beam 74A350714-2001, -2002	Extrusion	7075-T73511 Al Aly
13		Doubler 74A350722-2017, -2018	0.050 Sheet	7075-T6 Alclad
14		Support 74A350718-2001	Forging	7075-T7354 Al Aly
15		Support 74A350720-2005, -2006	0.040 Sheet	7075-T6 Alclad
16	 	Angle 74A350772-2023, -2024 74A350772-2031, -2032	0.040 Sheet	7075-T6 Alclad

Figure 1. Material Index (Sheet 7)

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19		Intercoastal 74A350769-2115, -2116	0.032 Sheet	7075-T6 Alclad
20	14 15	Support 74A350772-2001, -2002 74A350772-2029, -2030	0.040 Sheet	7075-T6 Alclad
21		Intercoastal 74A350769-2045, -2046	0.032 Sheet	7075-T6 Alclad
22		Intercoastal 74A350769-2035, -2036	0.050 Sheet	7075-T6 Alclad
23		Intercoastal 74A350769-2025, -2026	0.050 Sheet	7075-T6 Alclad
24		Intercoastal 74A350769-2015, -2016	0.050 Sheet	7075-T6 Alclad
25		Intercoastal 74A350769-2009, -2010	0.032 Sheet	7075-T6 Alclad
26		Intercoastal 74A350769-2007, -2008	0.032 Sheet	7075-T6 Alclad
27		Housing 74A350771-2003, -2004	Casting	A356-T61 Al Aly
28		Intercoastal 74A350769-2003, -2004	0.032 Sheet	7075-T6 Alclad
29		Fairing 74A350721-2003, -2004	0.063 Sheet	7075-T6 Alclad
30		Frame 74A350711-2003, -2004	Pressing	7049-T73 Al Aly
31		Guide 74A350702-2007, -2008	Casting	A356-T61 Al Aly
32	6 7 8 12	Seal 74A350004-2001 74A350004-2013 74A350004-2015 74A350004-2017	11M942-1 Extr 11M942-1 Extr 11M1018-5 Extr 11M1018-6 Extr	Silicone Rubber

Figure 1. Material Index (Sheet 8)












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33		Pressure Seal 8211-201	-	Silicone Rubber
34		Angle  74A350007-2001	1MA100D05-10038 Extr	7075-T73511 Al Aly
35		Support 74A350720-2001, -2002	0.040 Sheet	7075-T6 Alclad
36		Angle 74A350726-2047	0.040 Sheet	7075-T6 Alclad
37	   	Seal 74A350004-2003 74A350004-2013 74A350004-2015 74A350004-2017	11M957-1 Extr 11M942-1 Extr 11M1018-5 Extr 11M1018-6 Extr	Silicone Rubber
38		Retainer 74A350712-2006, -2005	1MA10330D06 Extr	7075-T76511 Al Aly
39		Bow Handle 74A350719-1001, -1002	0.500 Tube	6061-T62 Al Aly
40	 	Pin 74A350703-2003, -2004 74A350703-2005	0.750 Rod	PH13-8MO CRES
41		Latch Number 2 and 3  74A350705-2005	0.050 Plate	PH13-8MO CRES
42		Latch Number 4  74A350709-2003	0.50 Plate	PH13-8MO CRES
43		Guide Seal 74A350768-2003, -2004	Casting	A356-T61 Al Aly
44		Support 74A350772-2025, -2026	0.040 Sheet	7075-T6 Alclad
45		Hinge 74A350737-2005, -2006	Pressing	7075-T73 Al Aly
46		Intercostal Assembly 74A350770-2001	0.050 Sheet	7075-T6 Alclad
47		Plate 74A350744-2009	0.063 Sheet	7075-T 76 Alclad
48	 	Beam Assembly 74A350732-2005 74A350732-2007	0.063 Sheet	7075-T6 Alclad

Figure 1. Material Index (Sheet 9)

IDX NO.	EFT	NOMENCLATURE AND PART NO.	DESCRIPTION	MATERIAL
49		Retainer 74A350713-2001	1MA10330D06 Extr	7075-T76511 Al Aly
50		Control Cam 74A350741-2001, -2002	1.50 Plate	6AL-4V Titanium
51		Retainer 74A350712-2001	1MA10330D06 Extr	7075-T76511 Al Aly
52		Angle 74A350726-2015, -2016	0.040 Sheet	7075-T6 Alclad
53		Angle 74A350726-2013	0.040 Sheet	7075-T6 Alclad
54		Angle 74A350726-2051	0.040 Sheet	7075-T6 Alclad
55		Angle 74A350726-2053	0.040 Sheet	7075-T6 Alclad
56		Bracket 74A350726-2005, -2006	0.050 Sheet	7075-T6 Alclad
57		Bracket 74A350726-2017, -2018	0.032 Sheet	7075-T6 Alclad
58		Bracket 74A350726-2041, -2042	0.032 Sheet	7075-T6 Alclad
59		Bracket 74A350726-2039	0.032 Sheet	7075-T6 Alclad
60		Bracket 74A350726-2037, -2038	0.050 Sheet	7075-T6 Alclad
61		Bracket 74A350726-2033, -2034	0.032 Sheet	7075-T6 Alclad
62		Angle 74A350726-2011, -2012	0.040 Sheet	7075-T6 Alclad
63		Bracket 74A350726-2031, -2032	0.050 Sheet	7075-T6 Alclad
64		Angle 74A350726-2049, -2050	0.040 Sheet	7075-T6 Alclad
65		Bracket 74A350726-2029, -2030	0.032 Sheet	7075-T6 Alclad
66		Bracket 74A350726-2027, -2028	0.032 Sheet	7075-T6 Alclad

Figure 1. Material Index (Sheet 10)





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68		Bracket 74A350726-2023, -2024	0.050 Sheet	7075-T6 Alclad
69		Bracket 74A350726-2035, -2036	0.032 Sheet	7075-T6 Alclad
70		Support-Bellows, Seal Canopy 74A350751-2003	Machining	A356-T6 Alclad
71		Support 74A350772-2003, -2004	0.040 Sheet	7075-T6 Alclad
72		Support 74A350772-2005, -2006	0.040 Sheet	7075-T6 Alclad
73		Support 74A350772-2007, -2008	0.040 Sheet	7075-T6 Alclad
74		Support 74A350772-2009, -2010	0.040 Sheet	7075-T6 Alclad
75		Angle 74A350772-2013, -2014	0.040 Sheet	7075-T6 Alclad
76		Support 74A350772-2015, -2016	0.040 Sheet	7075-T6 Alclad
77		Angle 74A350772-2027, -2028	0.040 Sheet	7075-T6 Alclad
78		Support 74A350772-2011, -2012	0.040 Sheet	7075-T6 Alclad
79		Strip  74A350004-2009	0.031 Sheet	Silicone Rubber
80		Shim  74A350747-2001	0.094 Laminate	5052-H39 Al Aly
81		Plate  74A350706-2001	0.080 Sheet	301 CRES
82		Plate 74A350704-2003, -2004	0.080 Sheet	6AL-4V Ti Anl
83		Shim  74A350707-2009 74A350707-2011	0.040 Sheet 0.126 Plate	7075-T6 Alclad 5052-H39 Al Aly

Figure 1. Material Index (Sheet 11)





















IDX NO.	EFT	NOMENCLATURE AND PART NO.	DESCRIPTION	MATERIAL
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85		Strip 74A350004-2011	0.031 Sheet	Silicone Rubber
86		Strip 74A350004-2005	0.031 Sheet	Silicone Rubber
<p style="text-align: center;">LEGEND</p> <p> F/A-18A 162415 AND UP.</p> <p> F/A- 18A 161353 THRU 162414.</p> <p> F/A- 18A 161353 THRU 161525.</p> <p> F/A-18A 161526 AND UP.</p> <p> Four Required.</p> <p> F/A-18A 161353 THRU 161359.</p> <p> F/A-18A 161361 THRU 161744.</p> <p> F/A-18A 161728,161745 thru 162871</p> <p> F/A-18A 161353 THRU 161528.</p> <p> F/A-18A 161702 AND UP.</p> <p> Two required.</p> <p> F/A-18A 162872 AND UP.</p> <p> Six required.</p> <p> F/A-18A 161353 THRU 162852.</p> <p> F/A- 18A 162853 AND UP.</p> <p> F/A-18A 161353 THRU 162444.</p> <p> F/A-18A 162445 AND UP.</p> <p> F/A-18A 161353 THRU 161987.</p> <p> F/A-18A 162394 AND UP.</p>				

Figure 1. Material Index (Sheet 12)

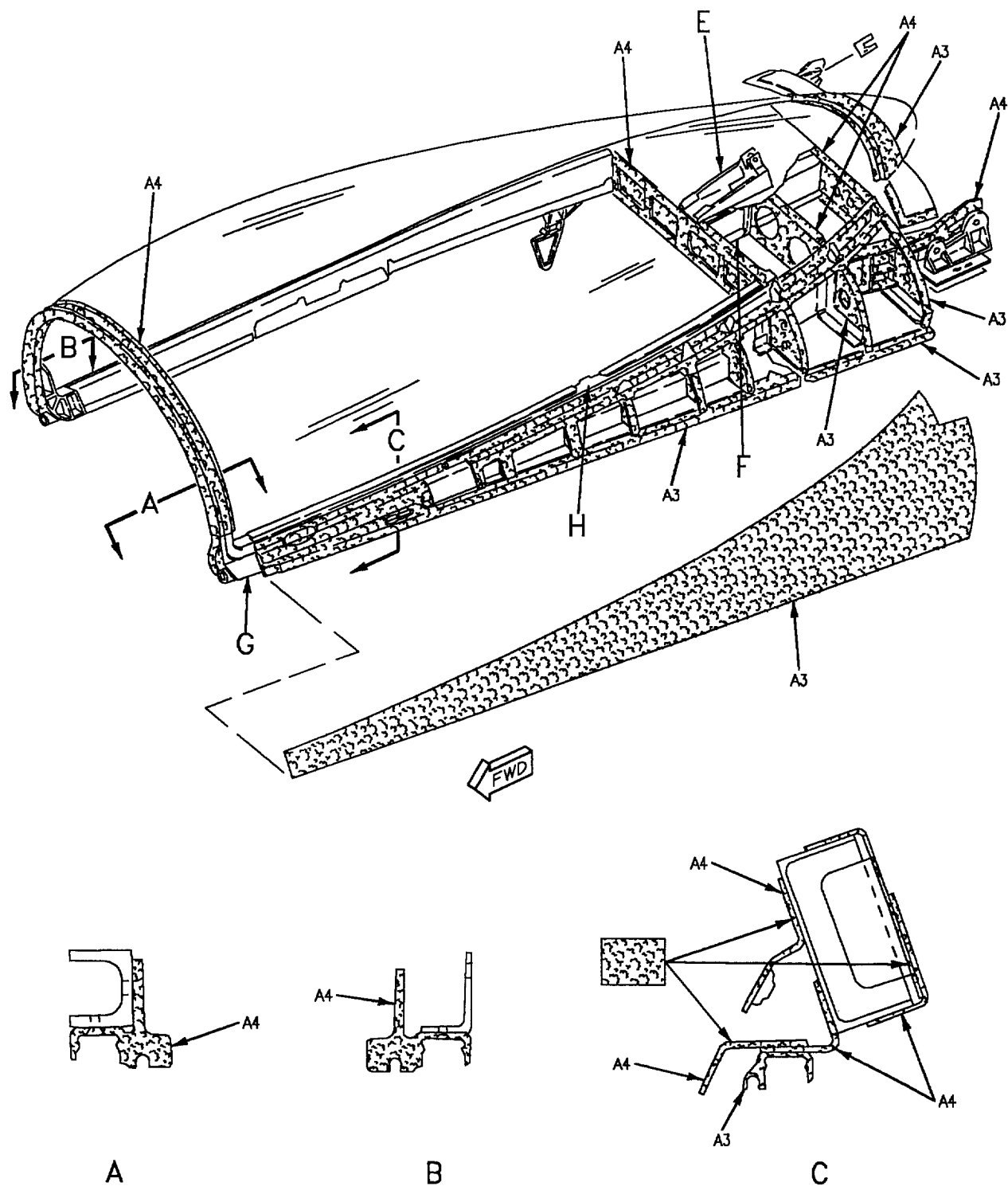


Figure 2. Repair Zones (Sheet 1)

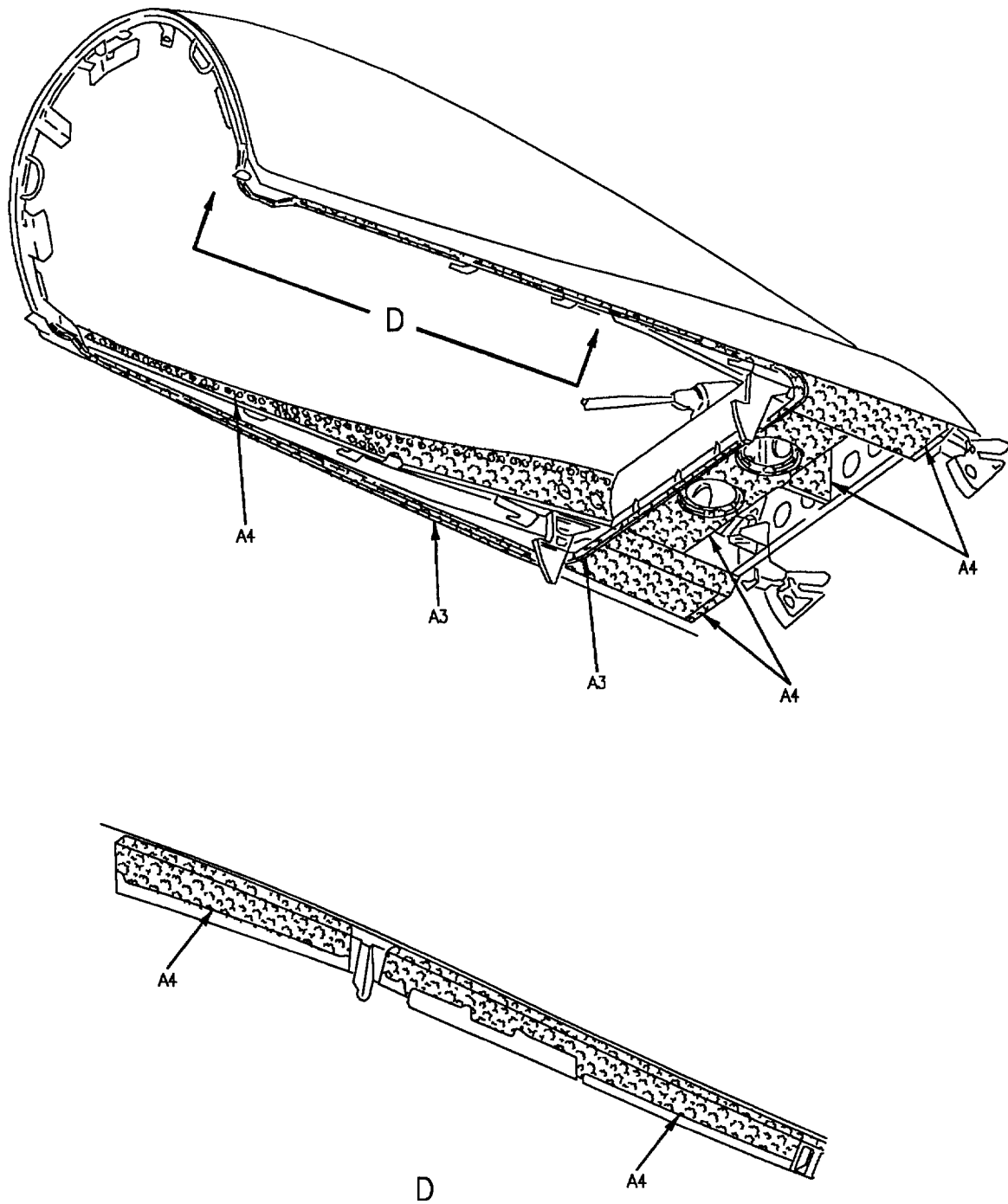


Figure 2. Repair Zones (Sheet 2)

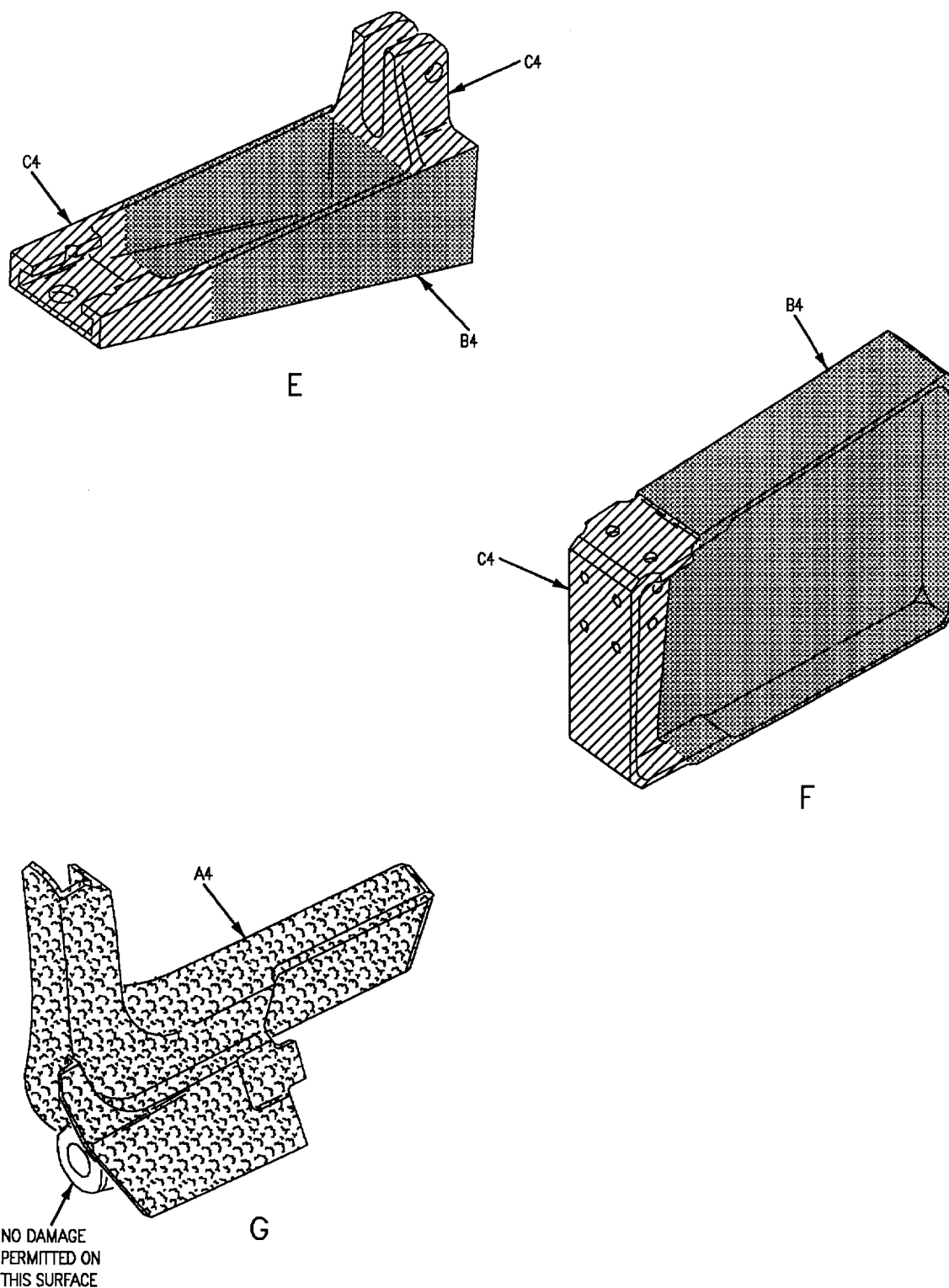


Figure 2. Repair Zones (Sheet 3)

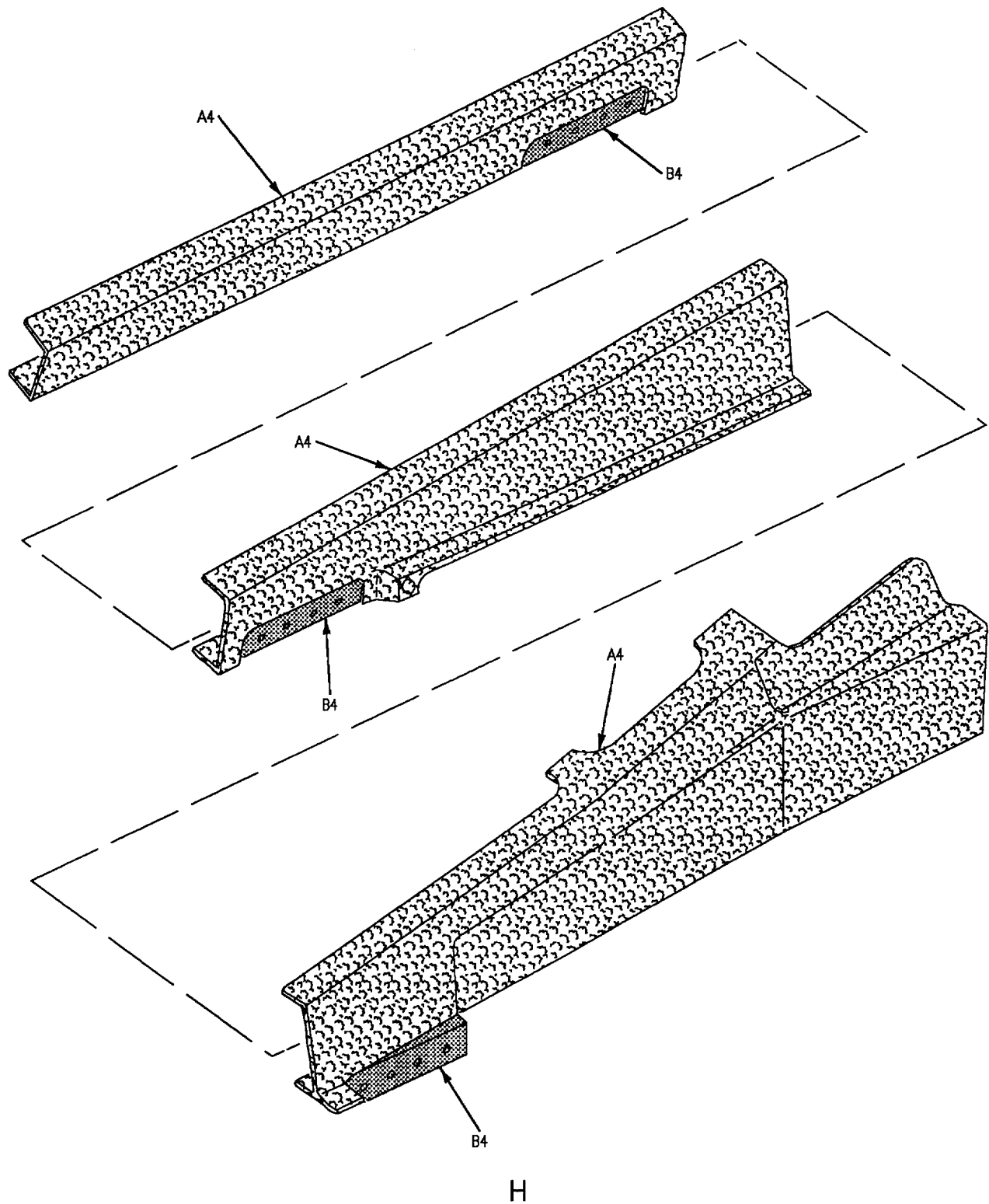


Figure 2. Repair Zones (Sheet 4)

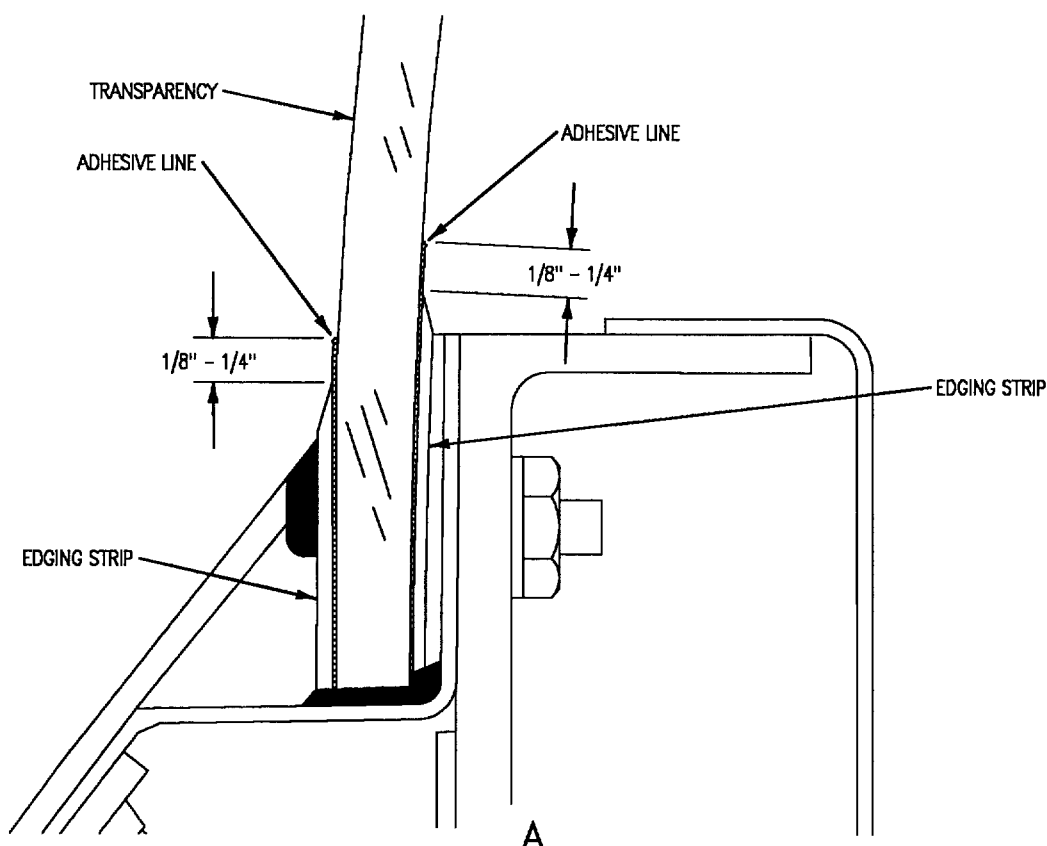
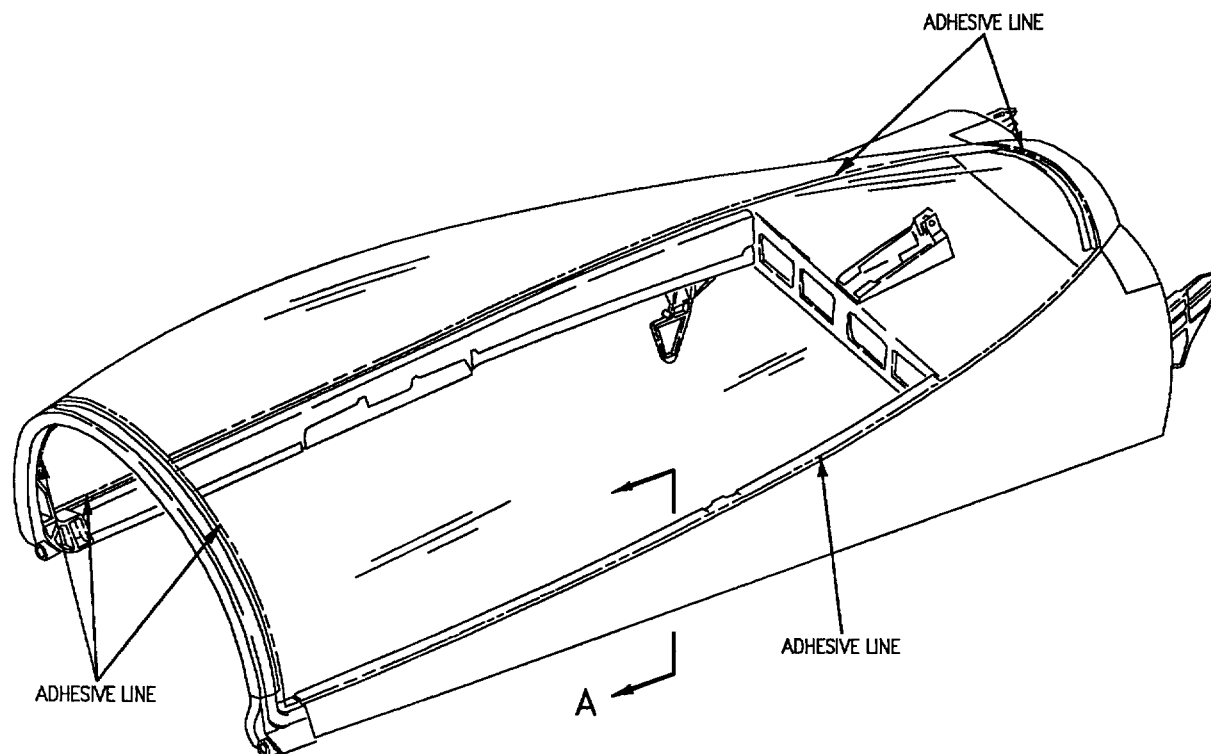


Figure 3. Canopy Transparency Adhesion Line

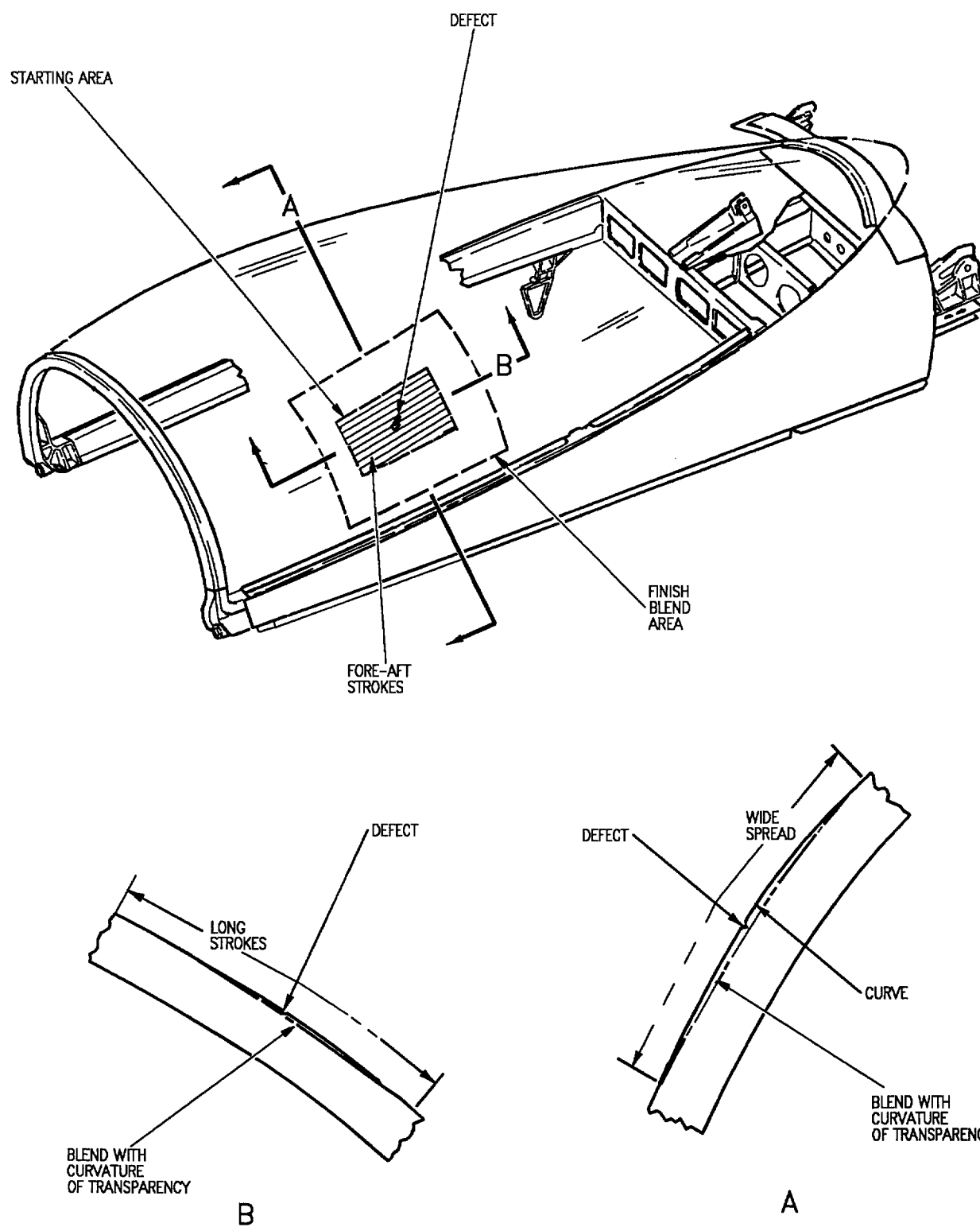


Figure 4. Acrylic Transparency Polishing

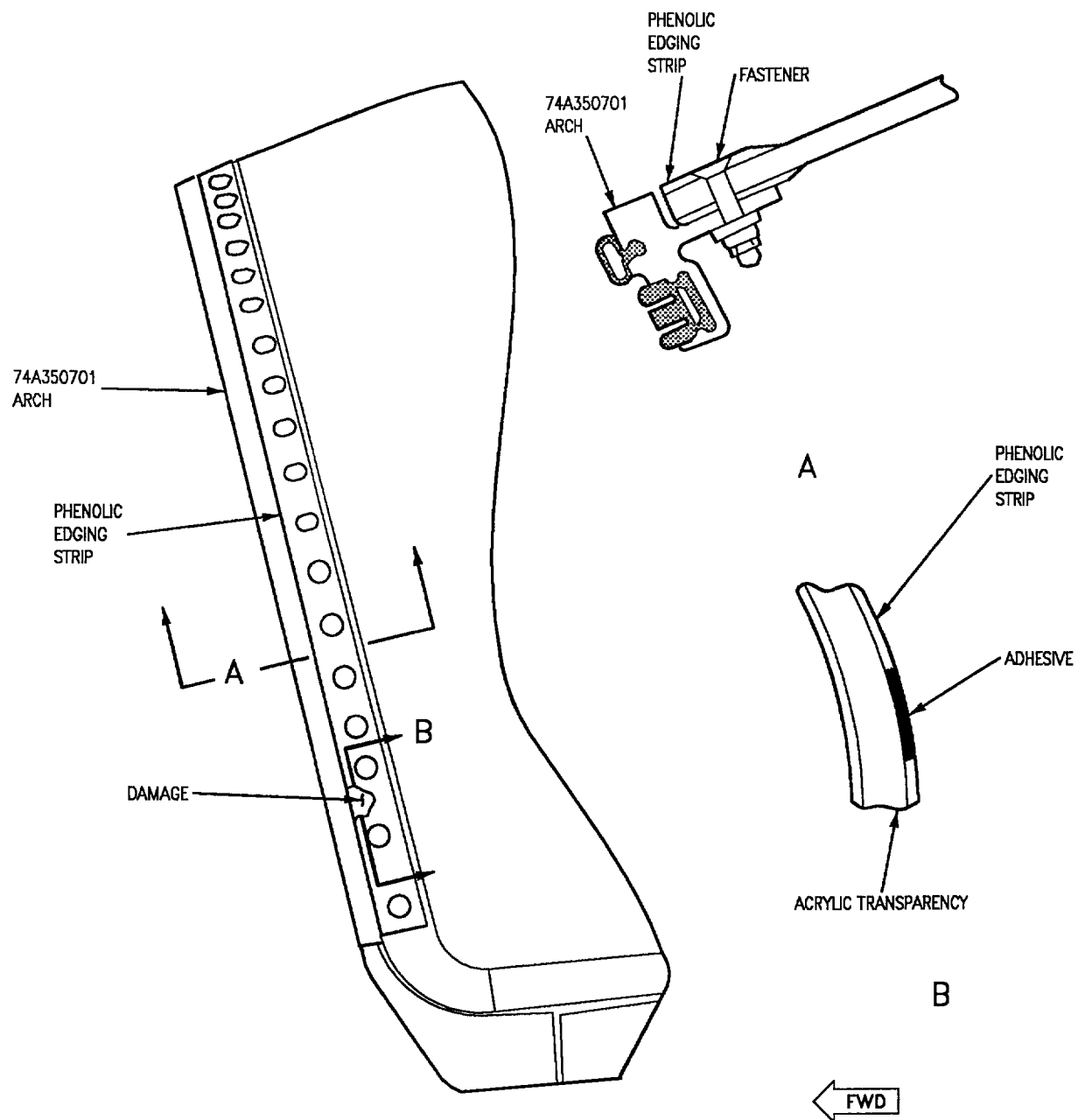


Figure 5. Installation of Repair Strap (Sheet 1)

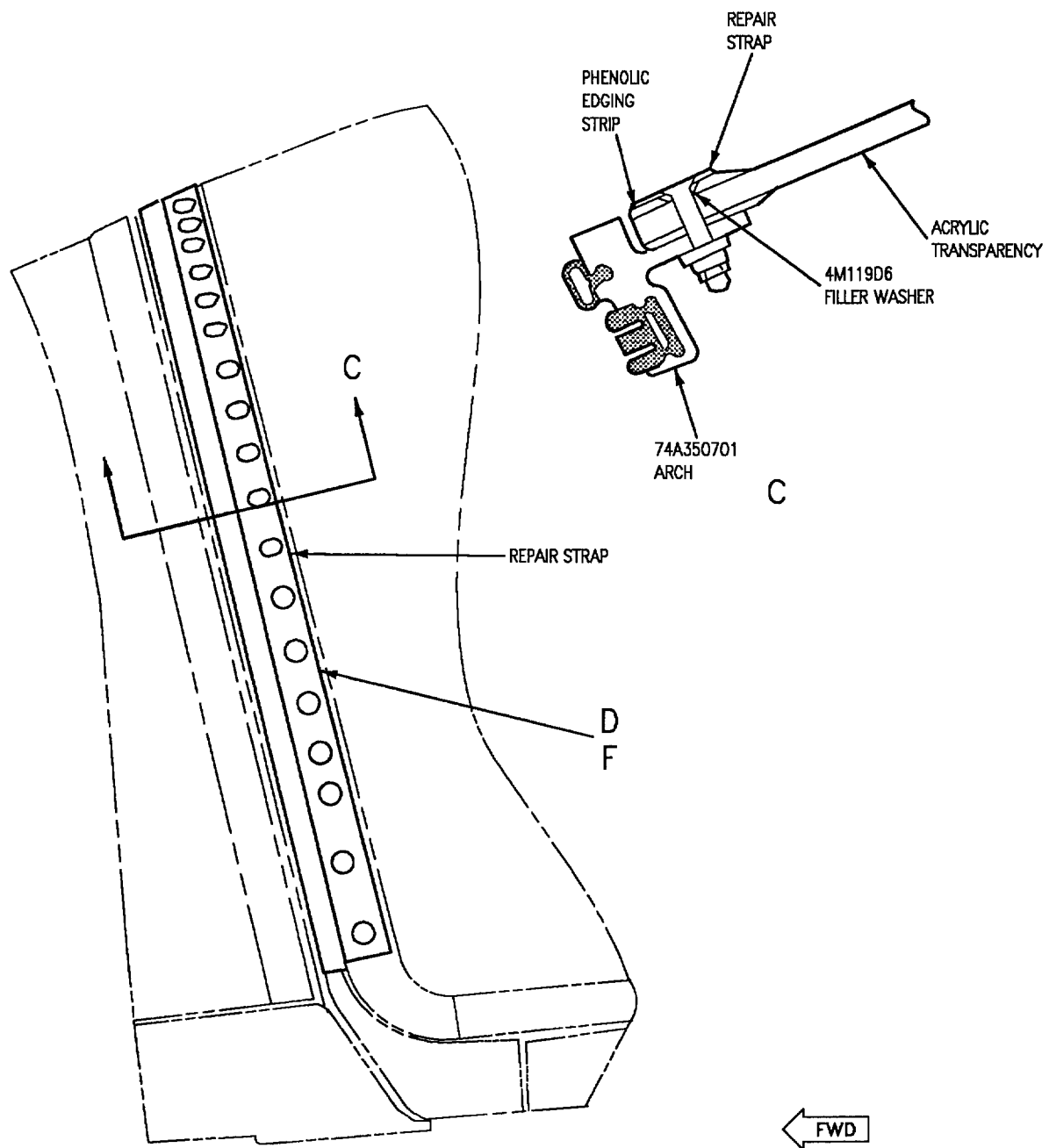


Figure 5. Installation of Repair Strap (Sheet 2)

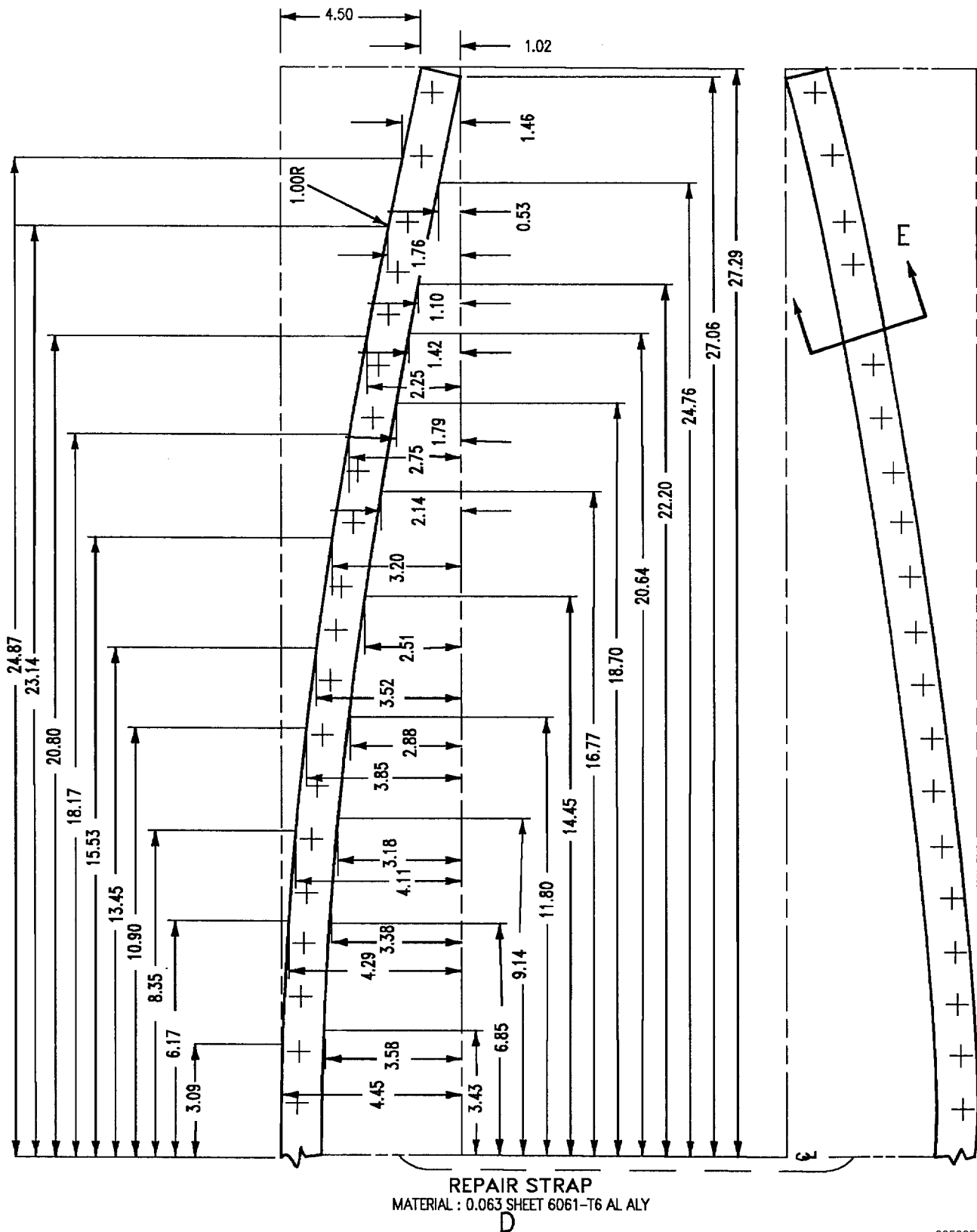


Figure 5. Installation of Repair Strap (Sheet 3)

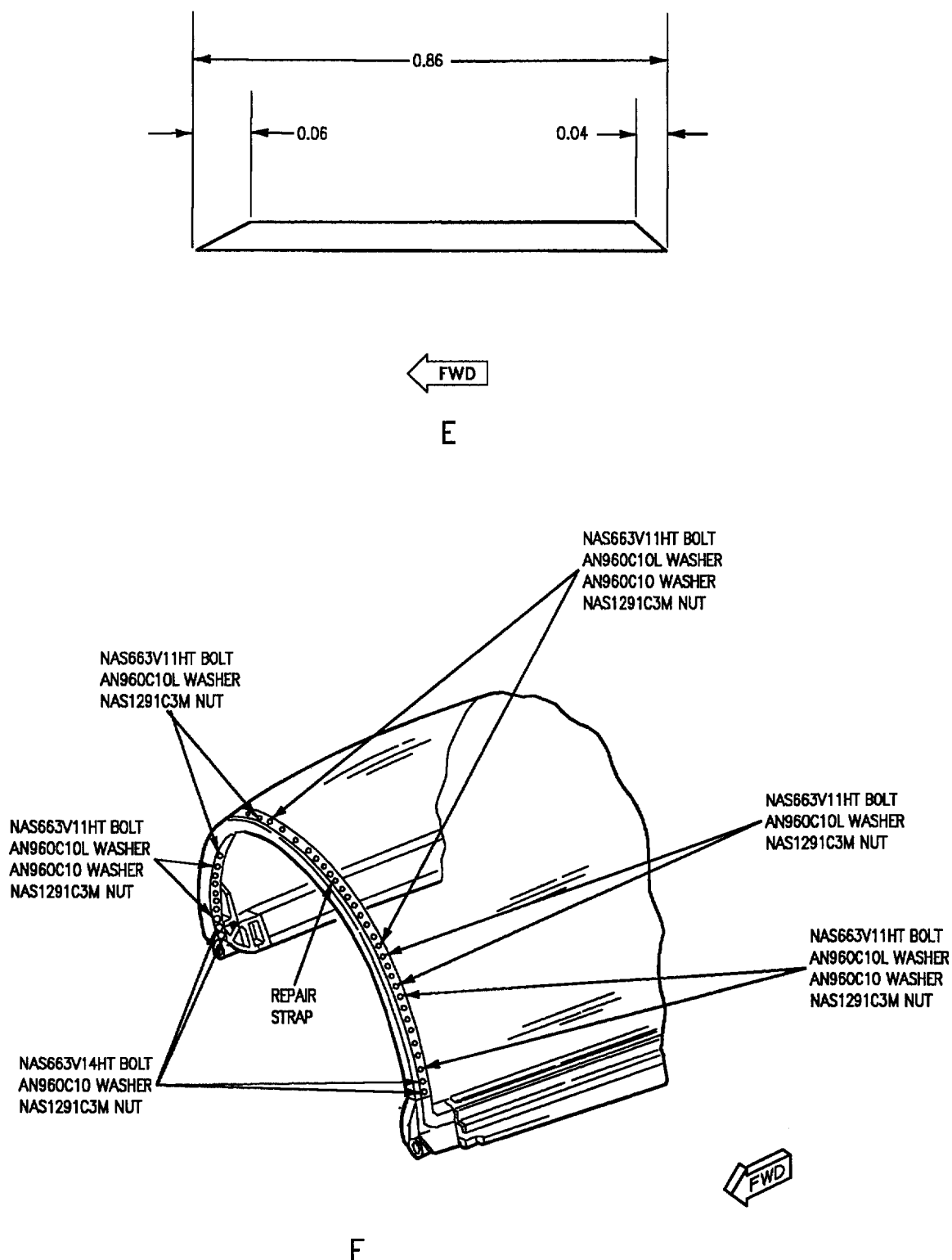


Figure 5. Installation of Repair Strap (Sheet 4)

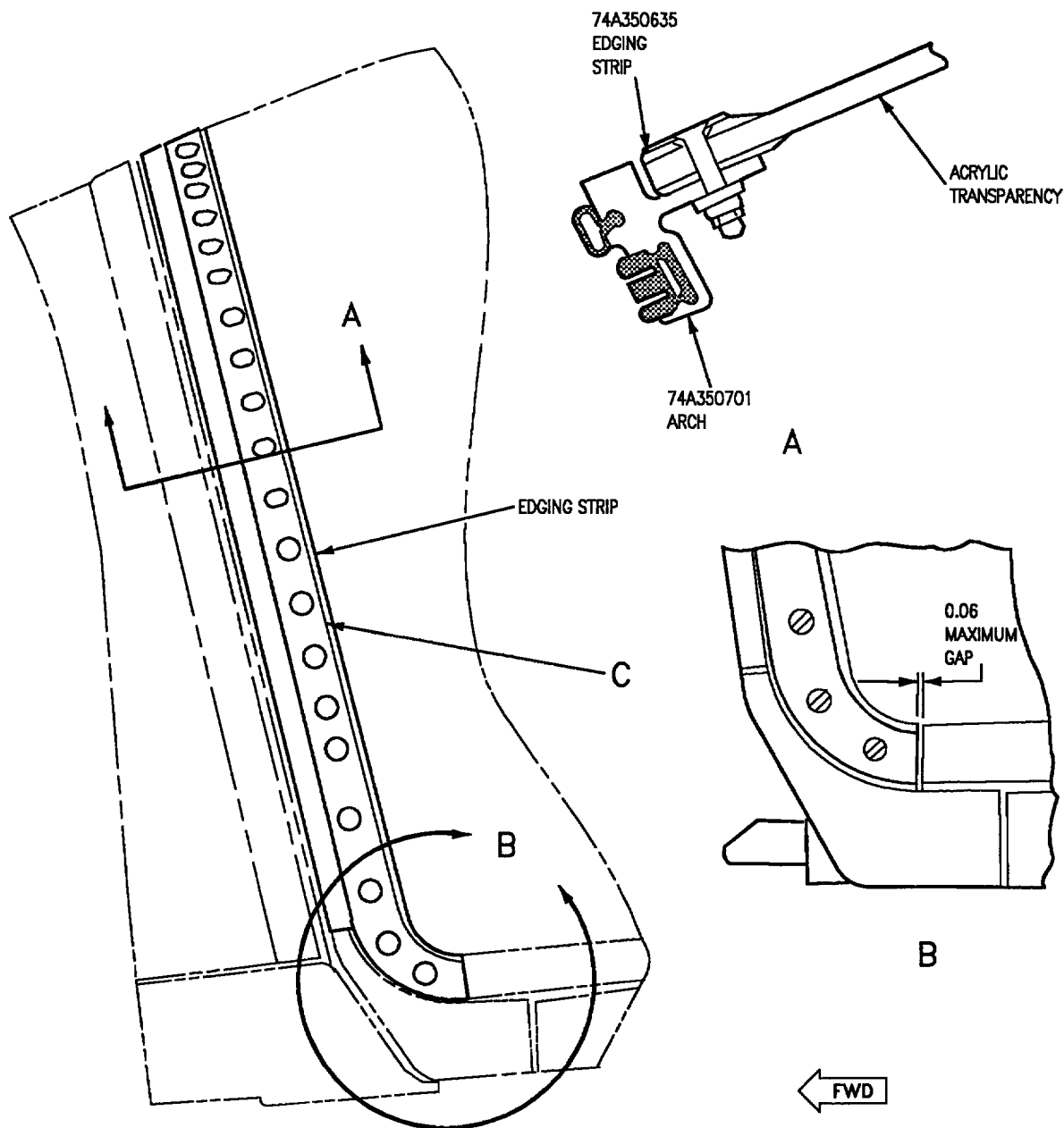


Figure 6. Installation of Edging Strip (Sheet 1)

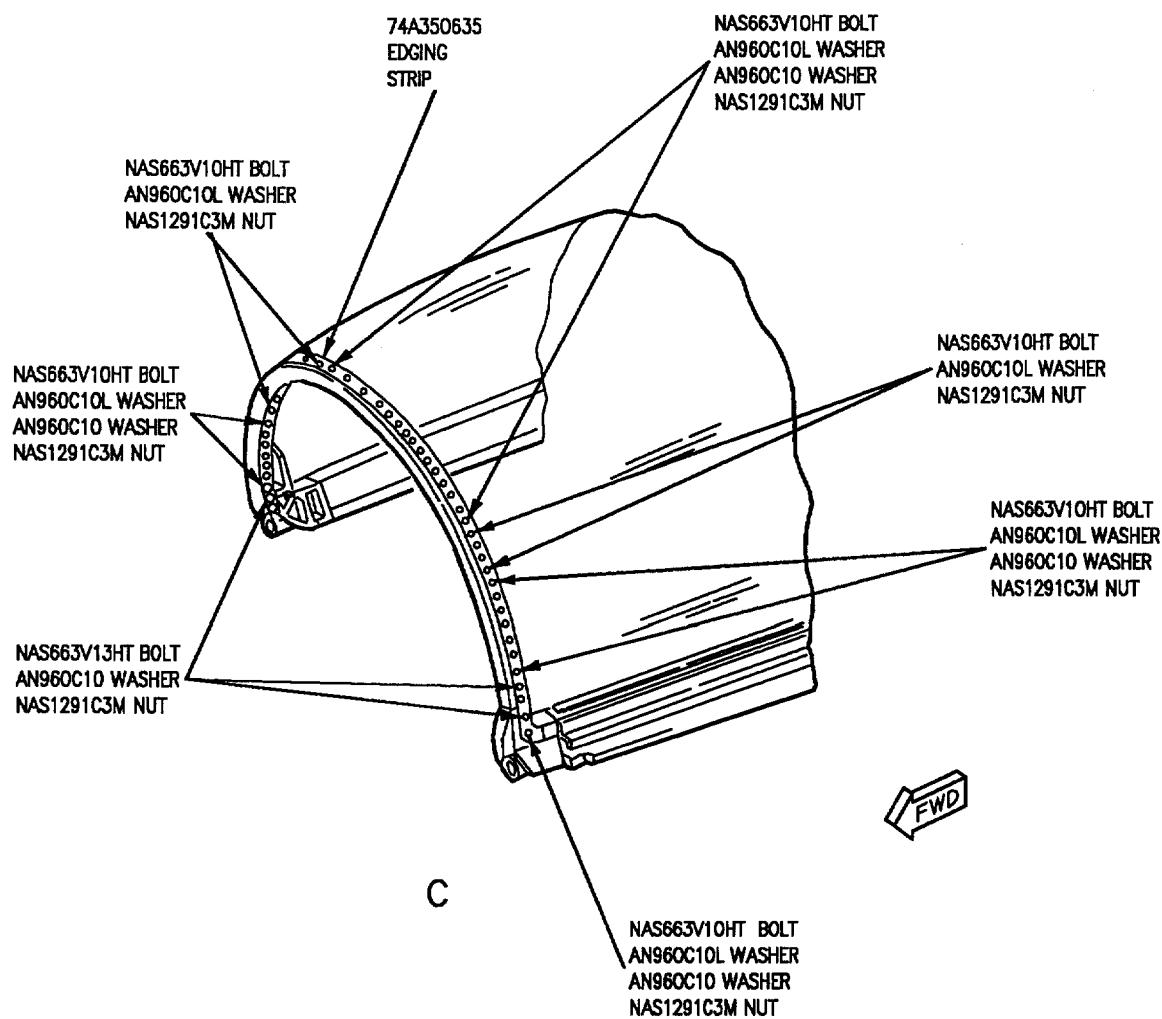


Figure 6. Installation of Edging Strip (Sheet 2)

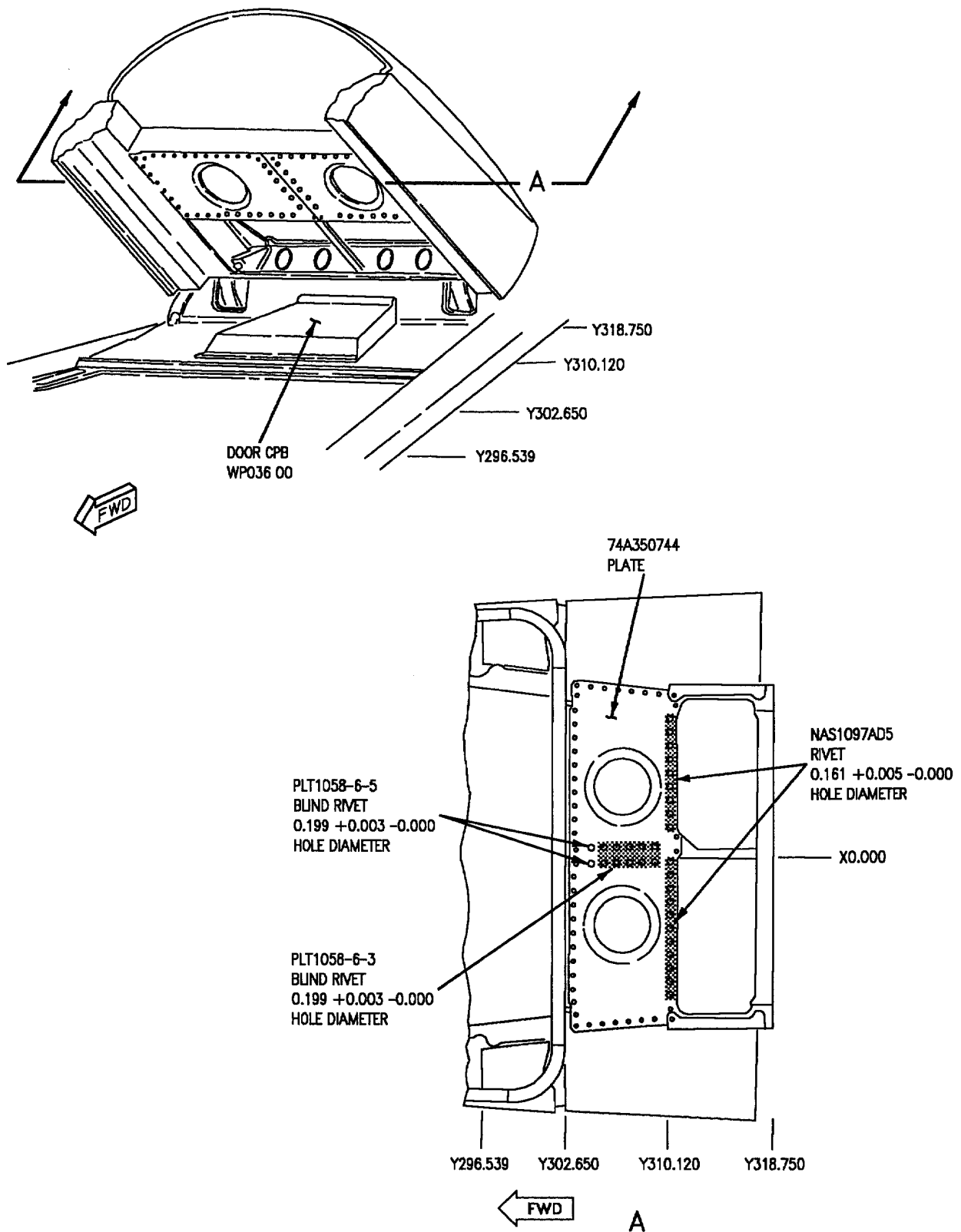


Figure 7. Chafing Repair for 74A350744 Plate Fasteners

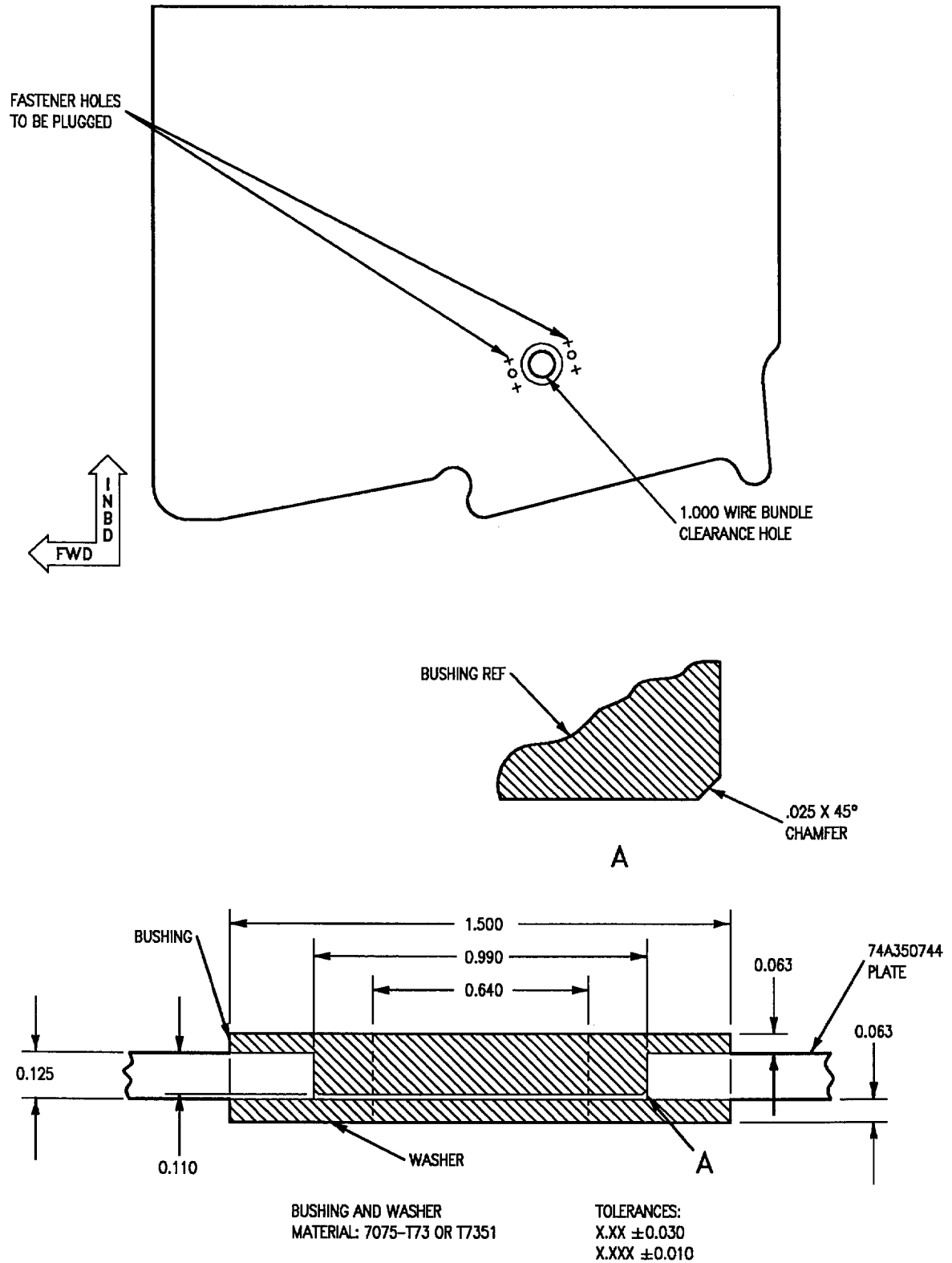


Figure 8. Canopy Deck, 74A350744, Adaption

DEPOT MAINTENANCE
STRUCTURE REPAIR
MAINTENANCE FIXTURE, RE174350004,
LOADING F/A-18A CANOPY

Reference Material

Canopy - F/A-18A	WP005 00
Seat, Canopy, Survival Equipment and Boarding Ladder	A1-F18AC-120-300
Canopy Mounted Shielded Mild Detonating Cord (SMDC)	WP069 00
Canopy Pressure Seal	WP071 00
Canopy Weather Seal	WP072 00
Canopy Sling	WP085 00

Alphabetical Index

Subject	Page No.
Description	1
Leveling Fixture	1
Installing Canopy Into Fixture	6
Canopy Preparation	6
Fixture Preparation	6
Installing Canopy	6

Record of Applicable Technical Directives

None

1. DESCRIPTION.

2. The canopy maintenance fixture (fixture) is used to evaluate the canopy assembly under varying temperature conditions, locate repair components, and hold canopy during overhaul. The fixture is used during transparency replacement and contains drill blankets to locate transparency attachment holes as well as latch hook and control cam attachment holes. The fixture allows for rigging latch hooks and control cam fittings in the canopy to make sure the canopy mates with the aircraft structure correctly. The fixture requires accurate leveling and verification with an alignment kit before use and should be gage recycled with alignment kit to verify fixture remains accurate.

3. LEVELING FIXTURE.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Scale Adapter	TD1289-N
Scale, Vernier	204
Sight Level	545
Stand	231
Tooling Ball Scale Adapter	TD1289R

Materials Required

Nomenclature	Specification or Part Number
Quickset Plastic	RP1710
Quickset Plastic Hardener	RP1135

a. Make sure drill blankets (details 22, 23, 24, and 25, figure 2) are in upper position. Secure with L-pin (detail 369), typical eight places. See figure 2, view E.



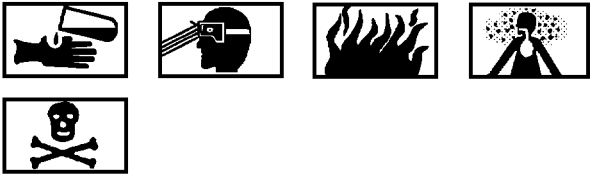
When moving fixture with forklift truck, be sure to position forks in pockets marked "FORKLIFT HERE". Lifting the fixture in an undesignated area can result in damage to the fixture.

b. Set fixture on hard level surface.

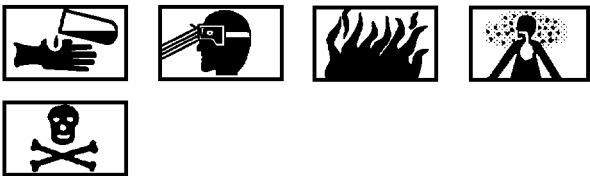
c. Attach scale with scale adapter and tooling ball adapter to construction balls 1, 2, 3, and 4. See figure 1, view A.

d. With scales vertical, sight scales with optical sight level.

e. Adjust leveling feet (detail 102), typical four places, to level construction balls 1 thru 4 in a horizontal plane. See view B.



Quickset Plastic 22



Quickset Plastic Hardener 23

f. Secure threads of leveling feet (detail 102) and leveling pads (detail 101) to floor, four places each, using quickset plastic. See view B.

g. Check alignment of fixture using AK174350004-1 alignment kit after leveling of fixture, when fixture is moved, or when gage recycling is required.

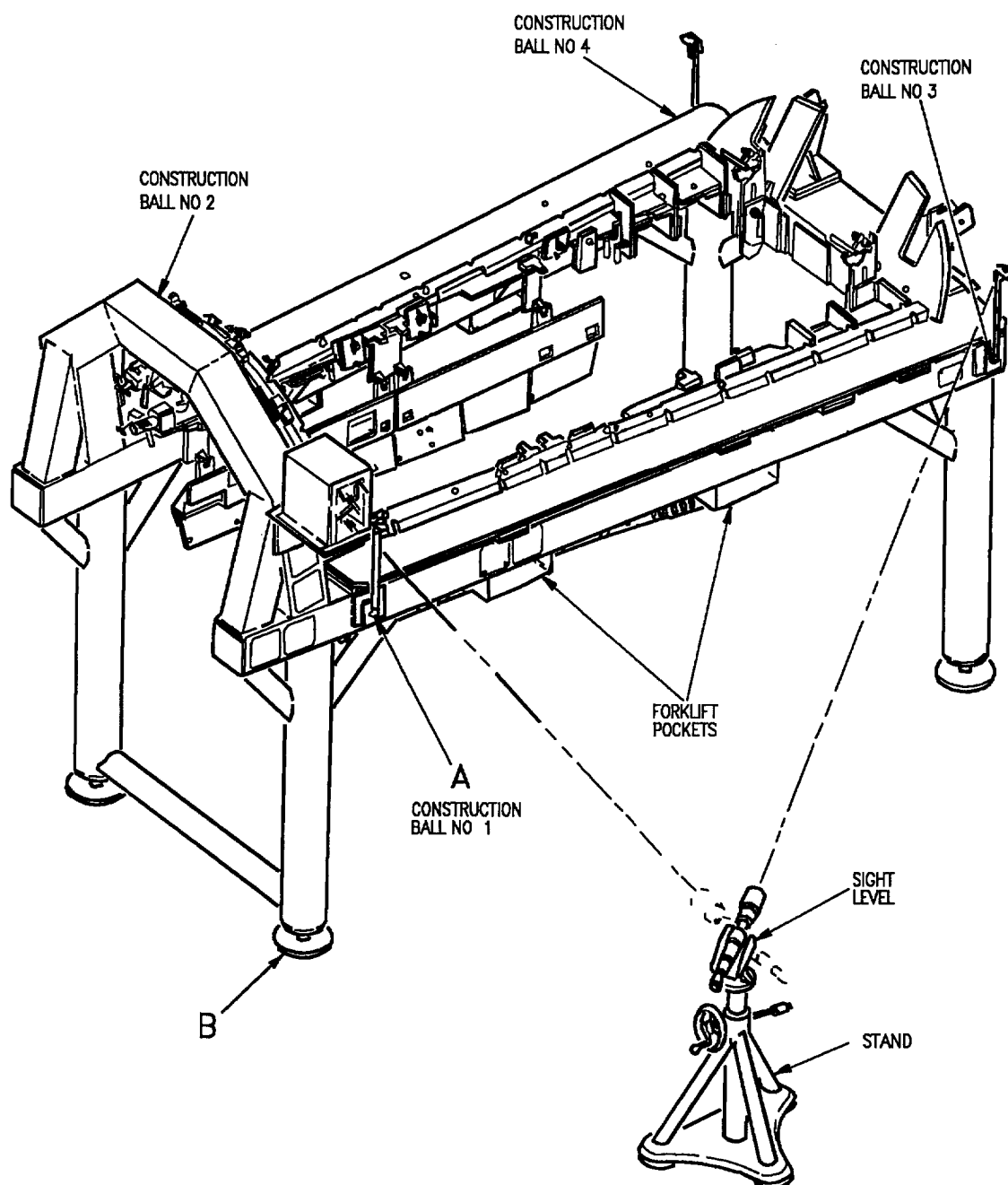


Figure 1. Fixture Leveling (Sheet 1)

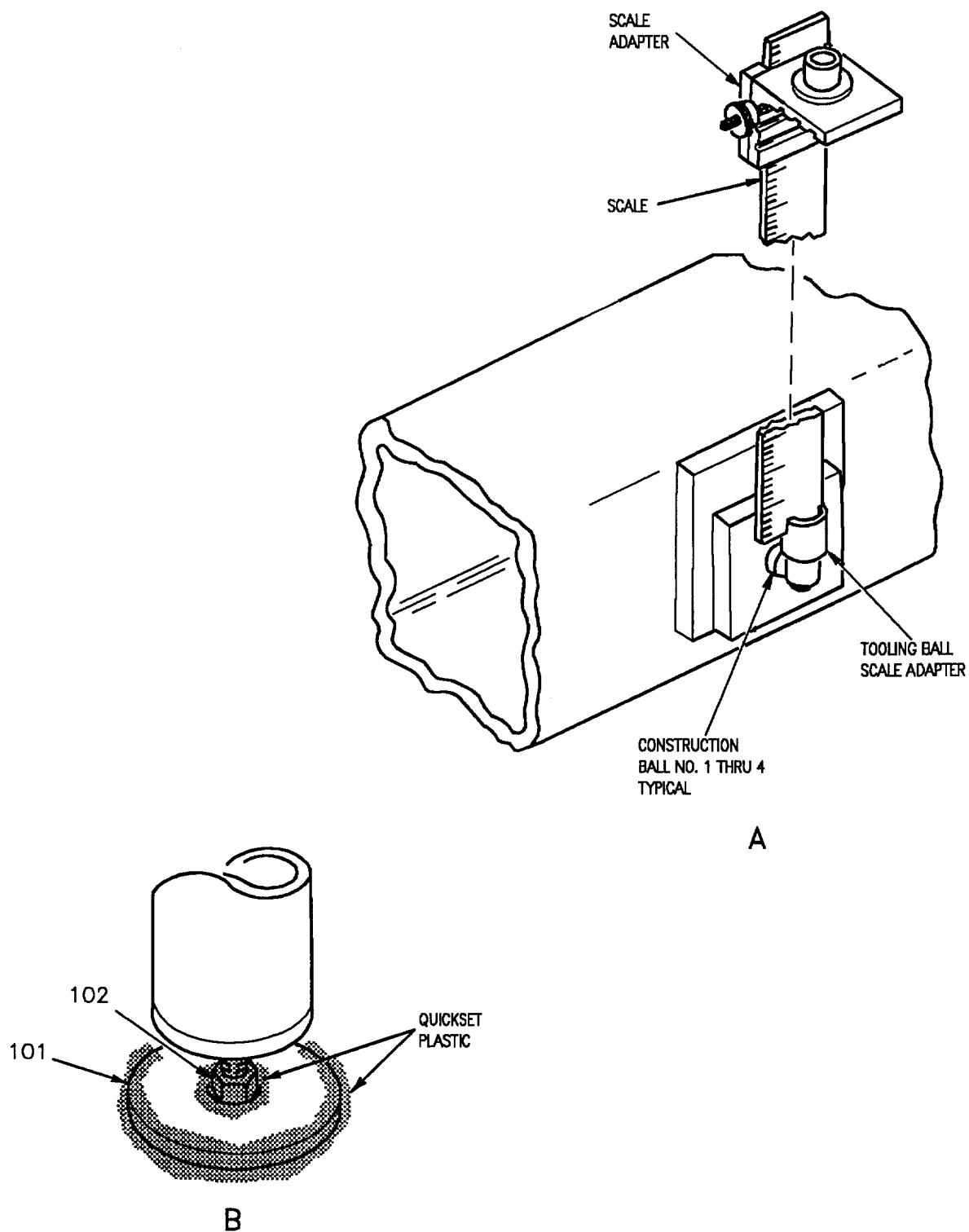


Figure 1. Fixture Leveling (Sheet 2)

DETAIL NO.	NAME	FUNCTION
101	Leveling pad	Pad that leveling feet rest on.
102	Leveling feet	Levels fixture.

Figure 1. Fixture Leveling (Sheet 3)

4. **INSTALLING CANOPY INTO FIXTURE.** See figure 2.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Canopy Hoisting - Handling Multiple Leg Sling	74D120020-1001
Portable Crane Hoisting Unit	1262AS100-1

Materials Required

Nomenclature	Specification or Part Number
Barrier Material	MIL-B-131, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1797, Type 1
Tape, Pressure Sensitive	A-A-883, Type 1, 1 inch

5. Fixture Preparation.

- Remove any removable details installed.
- Retract toggle clamp (detail 53), typical nine places, on casting (detail 105), see view A.
- Pull L-pin (detail 117) and retract pin (detail 110) nine places on casting (detail 105), see view A.
- Pull L-pin (details 155, 156), rotate locator pin (detail 219) until roll pin (detail 227) points forward and aft, and retract locator pin (detail 219) until it drops below upper surface of locator (details 181, 182), typical eight places, see views B and C.
- Pull L-pin (detail 156) 12 places, and retract locator (details 358, 365, and 366), typical two places each, see view D.
- Pull L-pin (detail 369) eight places, and drop drill blankets (details 22, 23, 24, and 25) into lower position, see view E.
- Pull L-pin (detail 112), retract locator (detail 127) and retract toggle clamp (detail 54), typical two places each, see view J.
- Retract thumbscrew (detail 341) until pad is flush with support (details 19, 55), see view F.

6. Canopy Preparation.

- Remove canopy pressure seal (A1-F18AC-120-300, WP071 00).
- Remove canopy weather seal (A1-F18AC-120-300, WP072 00).
- Remove pin and collar and remove pin, 74A350703, from corner frame, 74A350711, typical two places. See view B.
- Make sure SMDC cord has been removed (A1-F18AC-120-300, WP069 00).
- Remove canopy arch bow handles (A1-F18AC-SRM-220, WP005 00).



Failure to place barrier material between transparency and ethyl foam can cause damage to transparency.

- If transparency is serviceable and not to be replaced, trim two pieces each, of barrier material and ethyl foam to fit transparency. Cover transparency inside and out, placing barrier material between transparency and foam, securing with tape.

7. Installing Canopy.

- Install canopy sling, 74D120020-1001, on canopy (A1-F18AC-120-300, WP085 00). Canopy sling should be adjusted to horizontal position for canopy loading.
- Position portable crane hoisting unit above canopy. Attach hook on hoisting unit to ring on canopy sling.

WARNING

Personal injury or damage to canopy could occur with improper use of portable crane. Only lift canopy high enough to install canopy into fixture.

- Hoist canopy and align to maintenance fixture.

d. Fabricate two 10 x 10 inch foam blocks from ethyl foam and place them on the top FWD surfaces of maintenance fixture.

e. Slowly lower canopy into maintenance fixture aligning side fairings with locators (details 181, 182), see figure 2, sheet 1, and hinge arms with supports (details 19, 55), see view F.

f. Remove foam blocks.

g. Remove canopy sling and hoisting unit.

h. Insert pin (detail 110) and secure with L-pin (detail 117), typical nine places, on casting (detail 105), see view A.

i. Manually slide canopy assembly forward and locate canopy arch net to locator (detail 285). See view A.

j. Align hole in corner frame, 74A350711, with hole in fitting (detail 30) and insert pin (detail 383), typical two places, see view H.

k. Install drill block (detail 346) with locator (detail 133) aligned with slot in hinge arm, 74A350737, and inserting pin (detail 163). Typical left and right sides, see view F.

l. Secure drill block (detail 346) with pin (detail 343), washer (detail 344), and nut (detail 345), typical two places each, see view F.

m. Secure canopy arch, 74A350701, against locator (detail 285) by engaging toggle clamp (detail 53) on casting (detail 105), typical nine places, see view A.

n. Move aft end of canopy left or right to obtain equal gap between lower aft canopy sills and contour boards.

NOTE

If a 0.125 inch normal gap between hinge and locator (detail 346) does not exist, an engineering disposition is required.

o. Insert a 0.125 shim between hinge arm, 74A350737, and drill block (detail 346) and secure hinge assembly with thumbscrew (detail 341), typical two places, see view G.

p. If canopy is loaded for repair to hinge arms, complete steps q through s.

q. Raise locator (detail 127) and secure with L-pin (detail 112), typical two places, see view J.

NOTE

If 0.125 inch shim will not fit between locators (detail 127) and aft beam, shim to fit.

r. Install 0.125 inch shims between locator (detail 127) and aft beam, 74A350735, typical four places, see view K.

s. Engage toggle clamp (detail 54) securing aft beam, 74A350735, to locator (detail 127), typical two places, see view J.

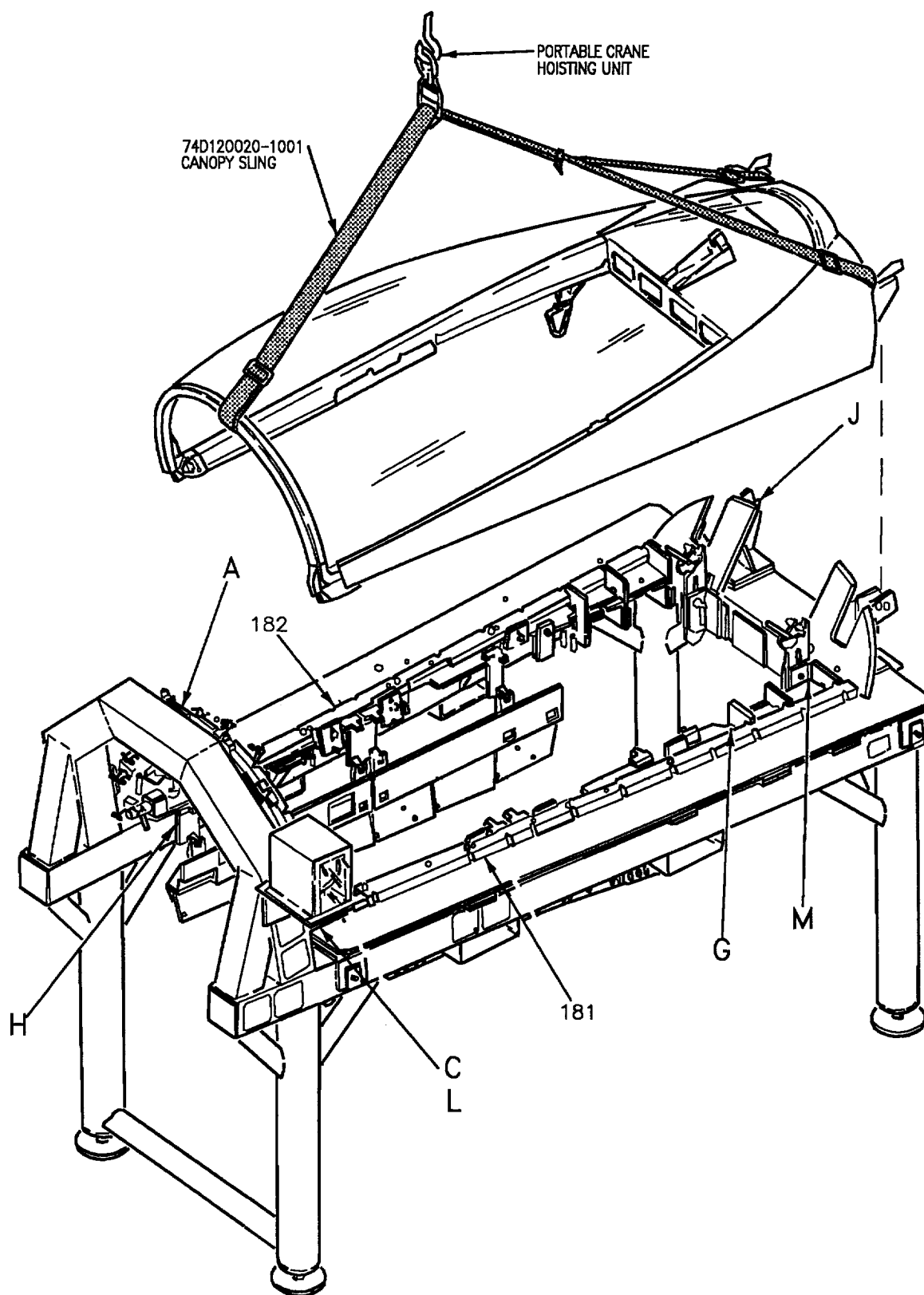


Figure 2. Installing Canopy (Sheet 1)

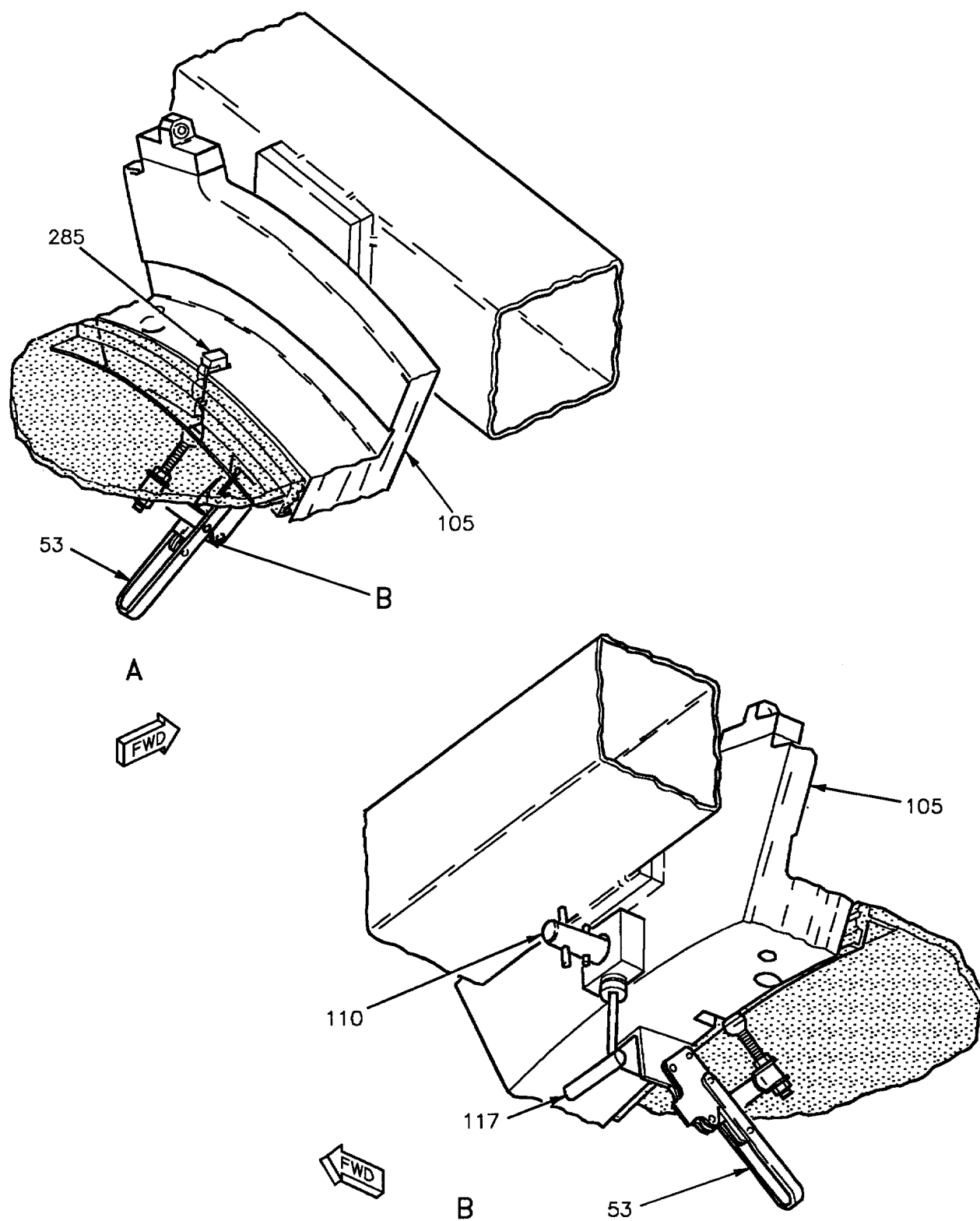


Figure 2. Installing Canopy (Sheet 2)

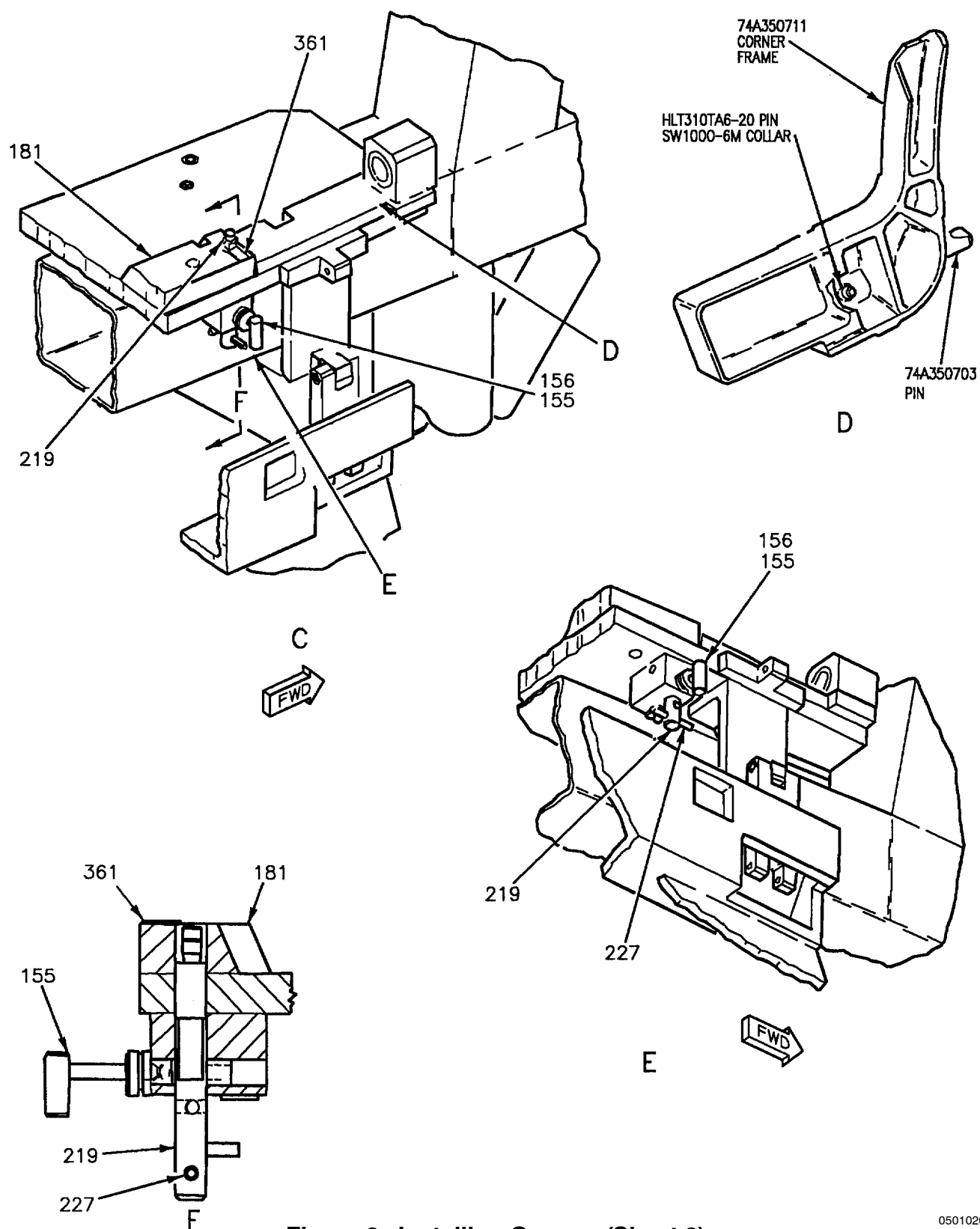


Figure 2. Installing Canopy (Sheet 3)

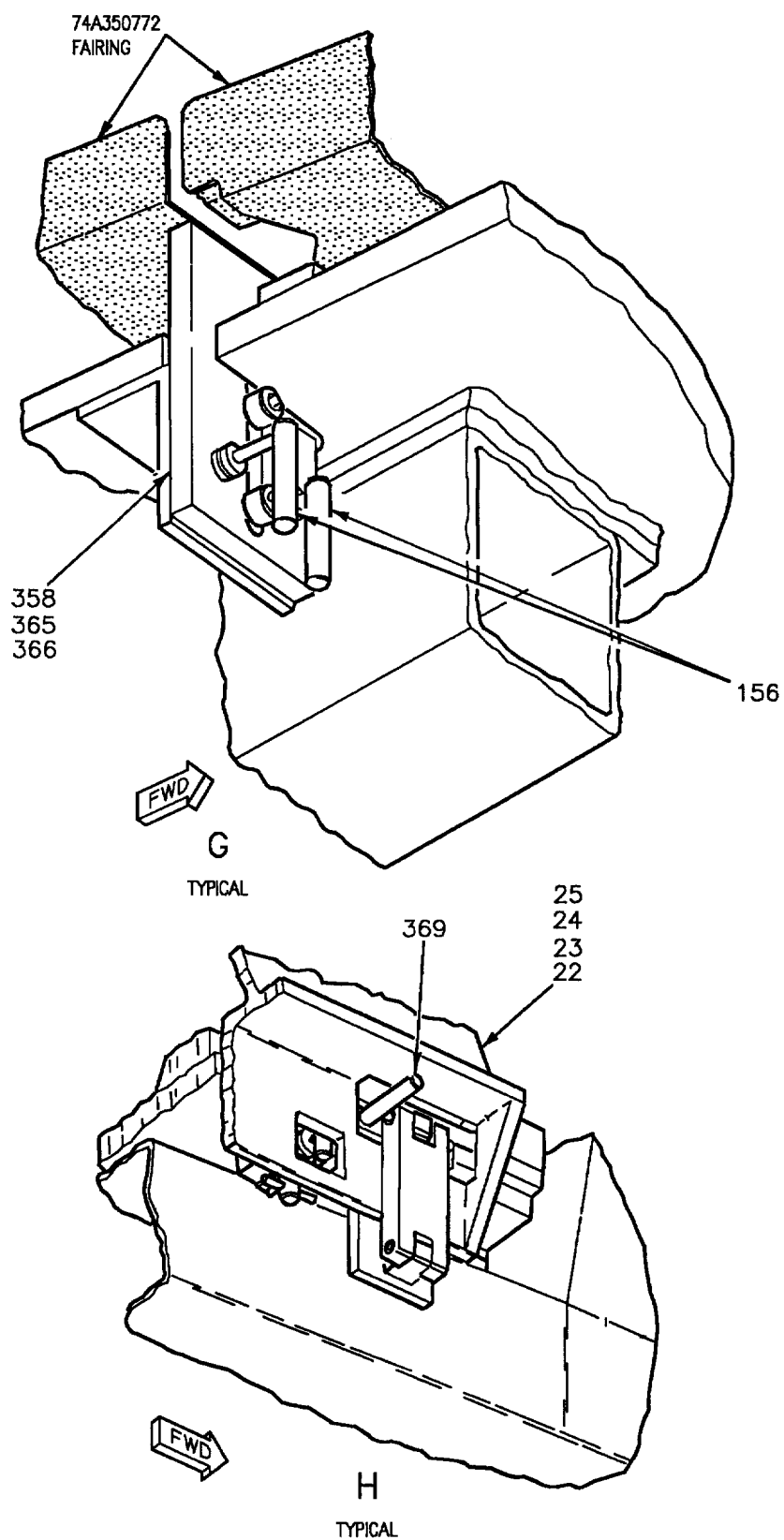


Figure 2. Installing Canopy (Sheet 4)

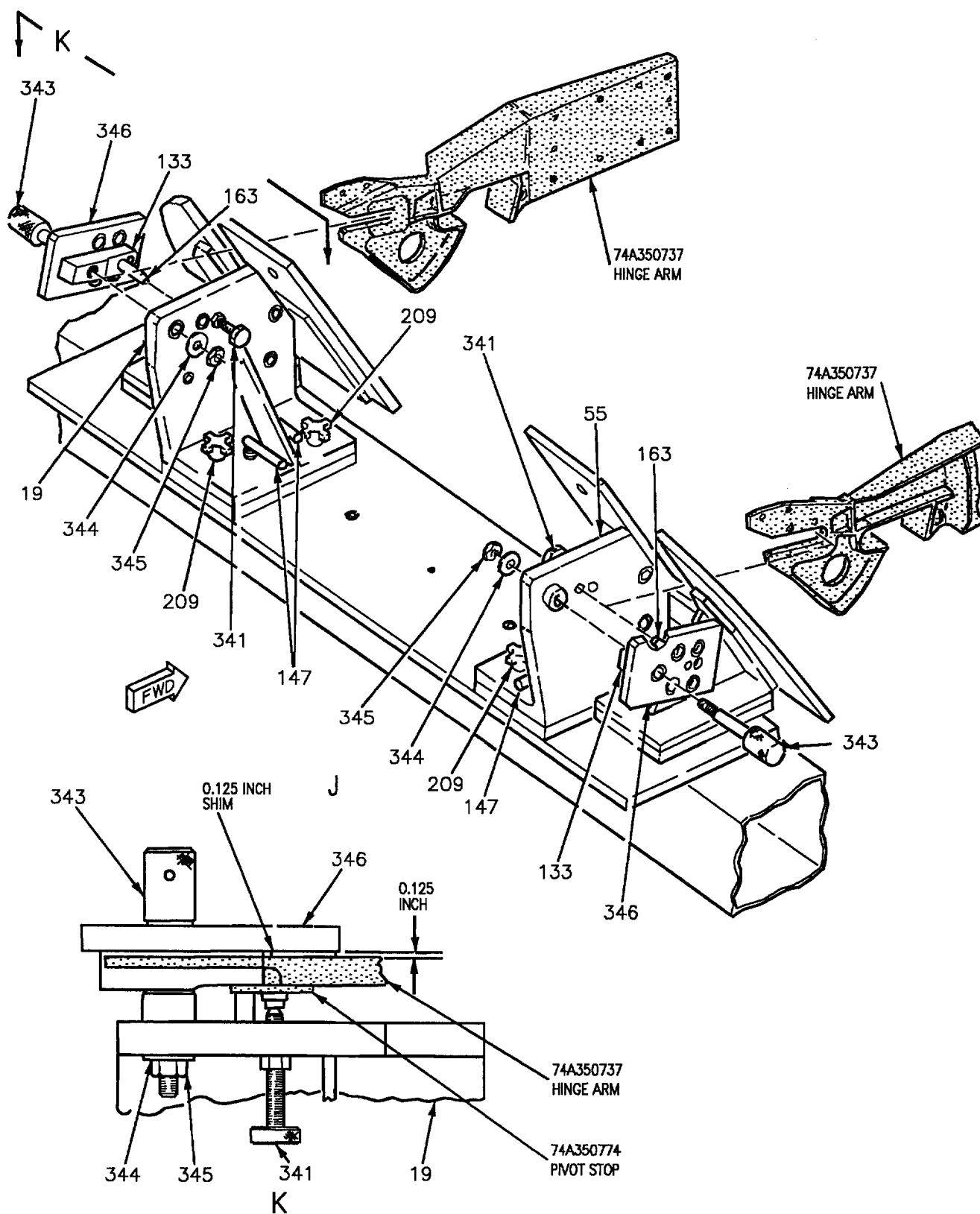


Figure 2. Installing Canopy (Sheet 5)

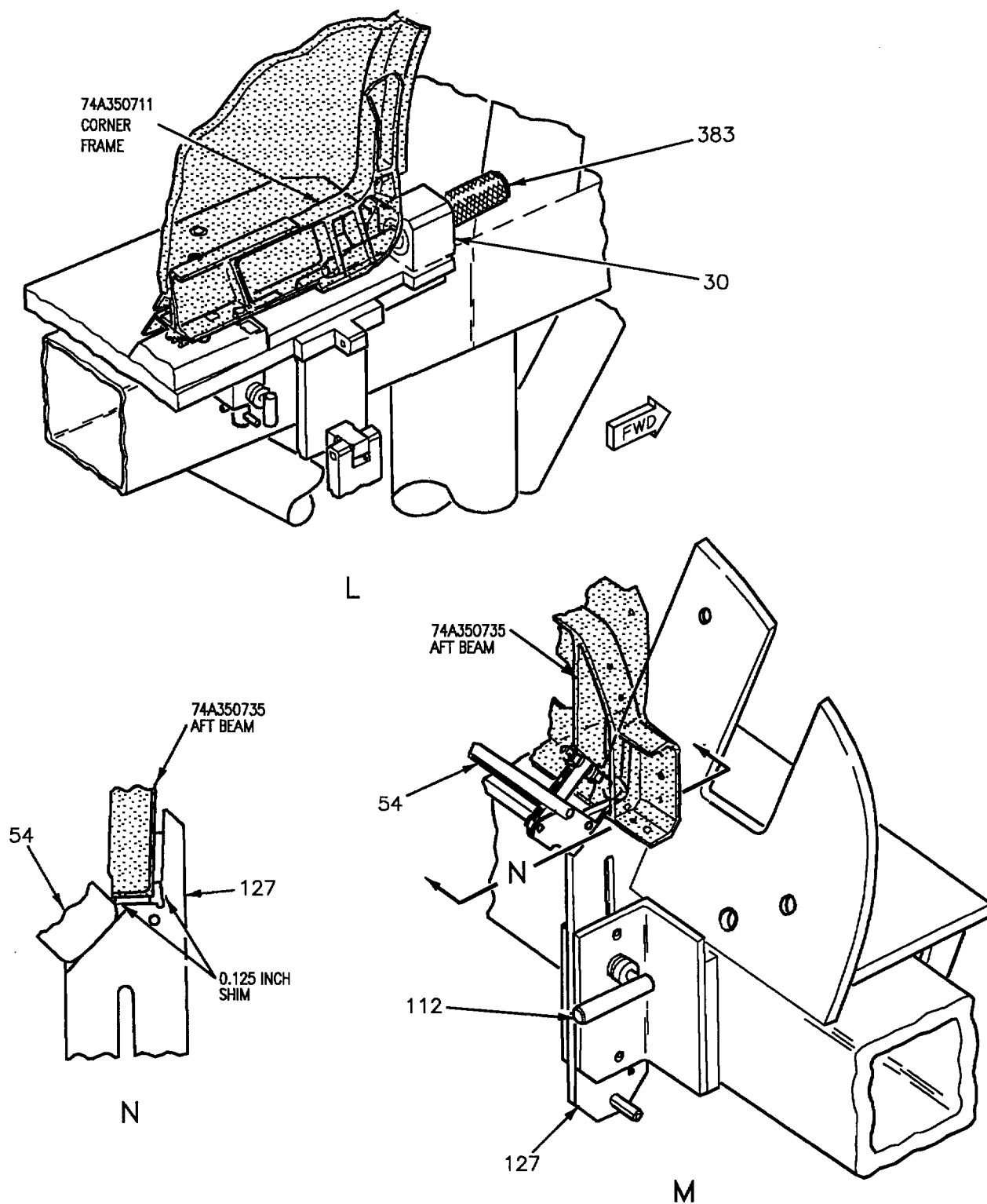


Figure 2. Installing Canopy (Sheet 6)

DETAIL NO.	NAME	FUNCTION
19	Support	Provides attachment points for hinge locators, drill block (detail 346), and supports hinge and canopy on left side.
22, 23, 24, 25	Drill blankets	Locates transparency attachment holes in forward half of side frame sections and latch 2, 3, and 4 attachment holes.
30	Fitting	Provides attachment points for canopy at corner frame sections.
53	Toggle clamp	Secures canopy arch, 74A350701, to arch locators (detail 285).
54	Toggle clamp	Secures rear deck, 74A350735, to locator (detail 127).
55	Support	Provides attachment points for hinge locators, drill block (detail 346) and supports, and supports hinge and canopy on right side.
105	Casting	Contains various details for clamping, inspecting, and locating canopy arch, 74A350701.
110	Pin	Supports and moves locator (detail 285).
112	L-pin	Retains locator (detail 127).
117	L-pin	Retains pin (detail 110) and locator (detail 285).
127	Locator	Locates and supports aft deck, 74A350735.
133	Locator	Aligns drill block (detail 346) with slot in hinge, 74A350737.
147	L-pin	Locates supports (detail 19, 55) on maintenance fixture.
155	L-pin	Retains locator pin (detail 219) two places.
156	L-pin	Secures locators (detail 358, 365, 366) and retains locator pin (detail 219) six places.
163	Pin	Positions drill block (detail 346) within slot in hinge, 74A350737.
181, 182	Locators	Contains side seal retainer, 74A350712 locator pin (detail 219).
209	Hand knob	Secure supports (detail 19, 55) to maintenance fixture.
219	Locator pin	Locates side seal retainer, 74A350712.
227	Roll pin	Used as a handle and directional indicator for locator pin (detail 219).

Figure 2. Installing Canopy (Sheet 7)

DETAIL NO.	NAME	FUNCTION
285	Locator	Locates canopy arch, 74A350701, on casting (detail 105).
341	Thumb screw	Secures hinge, 74A350737, and pivot stop, 74A350774, to drill block (detail 346).
343	Pin	Secures drill block (detail 346) and hinge, 74A350737, to support (detail 19, 55).
344	Washer	Use with pin (detail 343).
345	Nut	Use with pin (detail 343).
346	Drill block	Locates attachment holes in hinge, 74A350737, for pivot stop, 74A350774.
358	Locator	Provides net and 0.125 inch setback references for inspecting and locating lower fairing support assemblies, 74A350772, and inter-coastal, 74A350769.
361	Pad	Used as a stop to retain head of locator pin (detail 219) in one position.
365, 366	Locator	Provides net and 0.125 inch setback references for inspecting and locating aft lower fairing support assembly, 74A350772, and inter-coastal, 74A350769.
369	L-pin	Secures drill blanket (detail 22, 23, 24, 25) in drilling position.
383	Pin (undersize)	Attaches corner frame section, 74A350711, to fitting (detail 30).

Figure 2. Installing Canopy (Sheet 8)

DEPOT MAINTENANCE**STRUCTURE REPAIR****F/A-18A CANOPY COMPONENT REPLACEMENT**

Reference Material

Maintenance Fixture, RE174350004, Loading F/A-18A Canopy	WP005 01
F/A-18A Canopy Transparency Removal, Installation, and Replacement	WP005 03
Aircraft Corrosion Control	A1-F18AC-SRM-500
Windshield, Canopy, and Cockpit Finish System	WP021 00
Structure Repair, General Information	A1-F18AC-SRM-200
Locating Blind Holes and Trim Lines	WP004 03
Gang Channel and Plate Nut Identification and Repair	WP004 05
Oversize Fasteners	WP004 07
Adhesive, Cement, and Sealant; Preparation and Application	WP011 00

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Record of Applicable Technical Directives

None

1. ARCH, 74A350701, INSPECTION AND REPLACEMENT. See figure 1.

b. Retract toggle clamps (detail 53) nine places, detail A.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, Canopy	RE174350004-1
Repair Kit, Canopy	RE274350004-1

c. Engage arch locators (detail 285) by removing L-pins (detail 117) and sliding T-pins (detail 110) forward; reinstall L-pins (detail 117), typical nine places, detail B.

d. Insert 0.125 inch shim between arch and arch locators (detail 285) to check mold line location of arch, detail B.

Materials Required

Nomenclature	Specification or Part Number
Adhesive	RTV-106
Cheesecloth	CCC-C-440, Type 1, Class 1
Methyl Ethyl Ketone	TT-M-261
Sealing Compound	MIL-S-83430, Class A-1/2

e. Retract arch locators (detail 285) by removing L-pins (detail 117) and sliding T-pins (detail 110) aft, typical nine places, detail A.

f. Using GO, NO-GO gage (detail 382), inspect for twist and Y plane location by inserting GO end of gage between arch and forward face of arch base (detail 105), detail G.

2. INSPECTION.

a. Make sure canopy is loaded correctly and secure (WP005 01).

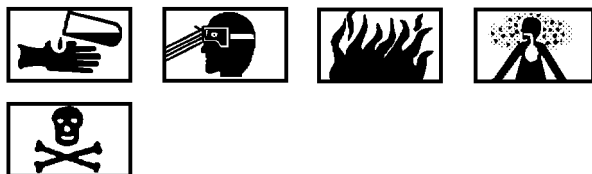
g. If excess gap exists between arch and arch base (detail 105), try to insert NO-GO end of gage (detail 382) between arch and forward face of arch base (detail 105). If gage can be inserted, arch is past maximum limits and must be replaced, detail G.

3. REPLACEMENT.



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

- a. Remove transparency (WP005 03). Do canopy preparation (WP005 01).
- b. Remove fasteners attaching arch to 74A350711 corner fitting; see figure 2 for fastener location.
- c. Remove damaged arch.



Methyl Ethyl Ketone

5

d. Clean all residual sealing compound from mating structure with a plastic scraper and cheesecloth moistened with methyl ethyl ketone.

e. Engage arch locators (detail 285) by removing L-pins (detail 117) and sliding T-pins (detail 110) forward; reinstall L-pins (detail 117), typical nine places, detail C.

f. Position new arch against arch locators (detail 285).

g. Insert 0.125 inch shim between arch and arch locators (detail 285) to establish mold line location, typical nine places, detail C.

h. Rotate arch to maintain best gap condition to 74A350711 corner fitting.

i. Clamp arch against arch locators (detail 285) using toggle clamp (detail 53), typical seven places, detail C.



Adhesive

12

j. Bond 74A350004 silicone rubber strip to arch using adhesive.

k. Locate arch to 74A350711 corner fitting per substeps below:

NOTE

74A350747 shims are installed only when needed to maintain proper fit between arch and 74A350711 corner fitting.

- (1) Insert 74A350747 shims as required, detail F.



Sealing Compound

7

(2) Lay surface seal all mating surfaces between arch and 74A350711 corner fitting (A1-F18AC-SRM-200, WP011 00).

(3) Secure arch to 74A350711 corner fitting with toggle clamps (detail 53), typical two places, detail E.

(4) Locate and drill five 0.1895 +0.0022 -0.0000 inch diameter holes, typical two places.

(5) Countersink holes in arch to flushness requirements of fastener.

(6) Wet install fasteners, see figure 2 and (A1-F18AC-SRM-200, WP011 00).

l. If both arch and 74A350711 corner fitting are being replaced, do substeps below:

- (1) Repeat steps k(1) through k(3).

(2) Install traveler bushing (detail 44) at hole locations 247, 248, 249, and 250 located in arch base (detail 105), detail E.

(3) Drill 0.1895 +0.0022 -0.0000 inch diameter holes.

(4) Countersink holes in arch to flushness requirements of fastener.

(5) Wet install fasteners, see figure 2 and (A1-F18AC-SRM-200, WP011 00).

m. At hole location 1 through 22 and 168 through 188:

(1) Temporarily install transparency with enough fasteners to hold in correct position (WP005 03).

NOTE

If oversize fasteners were used in existing transparency, use traveler bushing (detail 60 or 62) to drill pilot holes in arch.

(2) Insert traveler bushing (detail 66) into existing holes of transparency, detail A.

(3) Drill 0.1285 inch diameter pilot holes.

(4) Remove transparency (WP005 03).

(5) Open pilot holes to 0.196 +0.006 -0.000 inch diameter nominal size or drill oversize as required to match existing hole in transparency.

n. Install transparency (WP005 03).

o. Remove canopy from tool.

p. If both arch and 74A350711 corner fitting were replaced, dimensionally locate two holes per figure 2, and drill 0.1895 +0.0022 -0.0000 inch diameter hole.

q. Countersink holes to flushness requirements of fastener.

r. Wet install fasteners, see figure 2 and (A1-F18AC-SRM-200, WP011 00).

s. Position 74A350719 bow handles, 74A350723 supports, and 74A350007 angles on arch using old arch as reference. See figure 2, detail A.

t. Mate drill from mating structure to arch.

u. Countersink holes in arch to flushness requirements of fasteners.

v. Wet install fasteners, see figure 2 and (A1-F18AC-SRM-200, WP011 00).

w. Apply finish system as required (A1-F18AC-SRM-500, WP021 00).

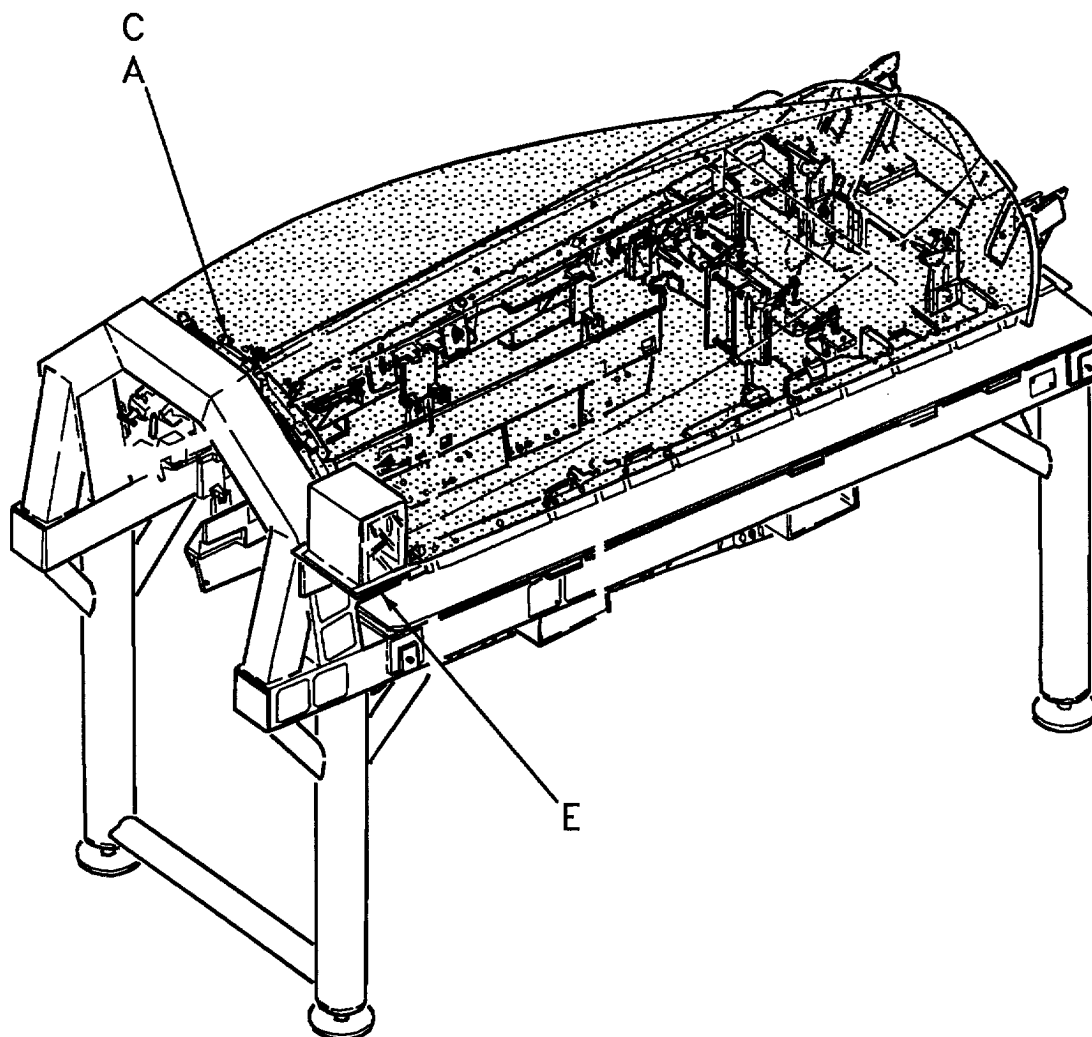


Figure 1. Inspection or Replacement - Arch (Sheet 1)

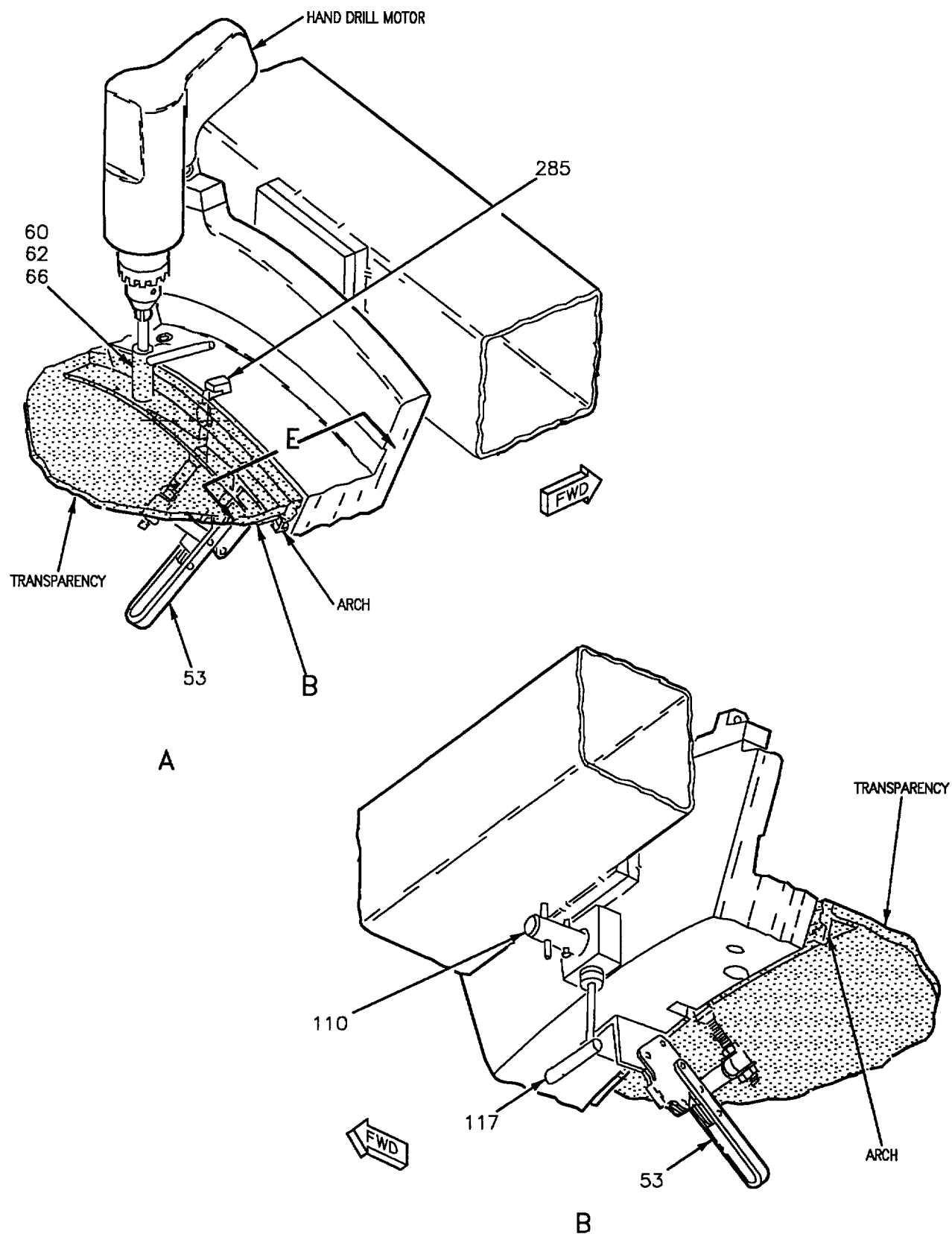


Figure 1. Inspection or Replacement - Arch (Sheet 2)

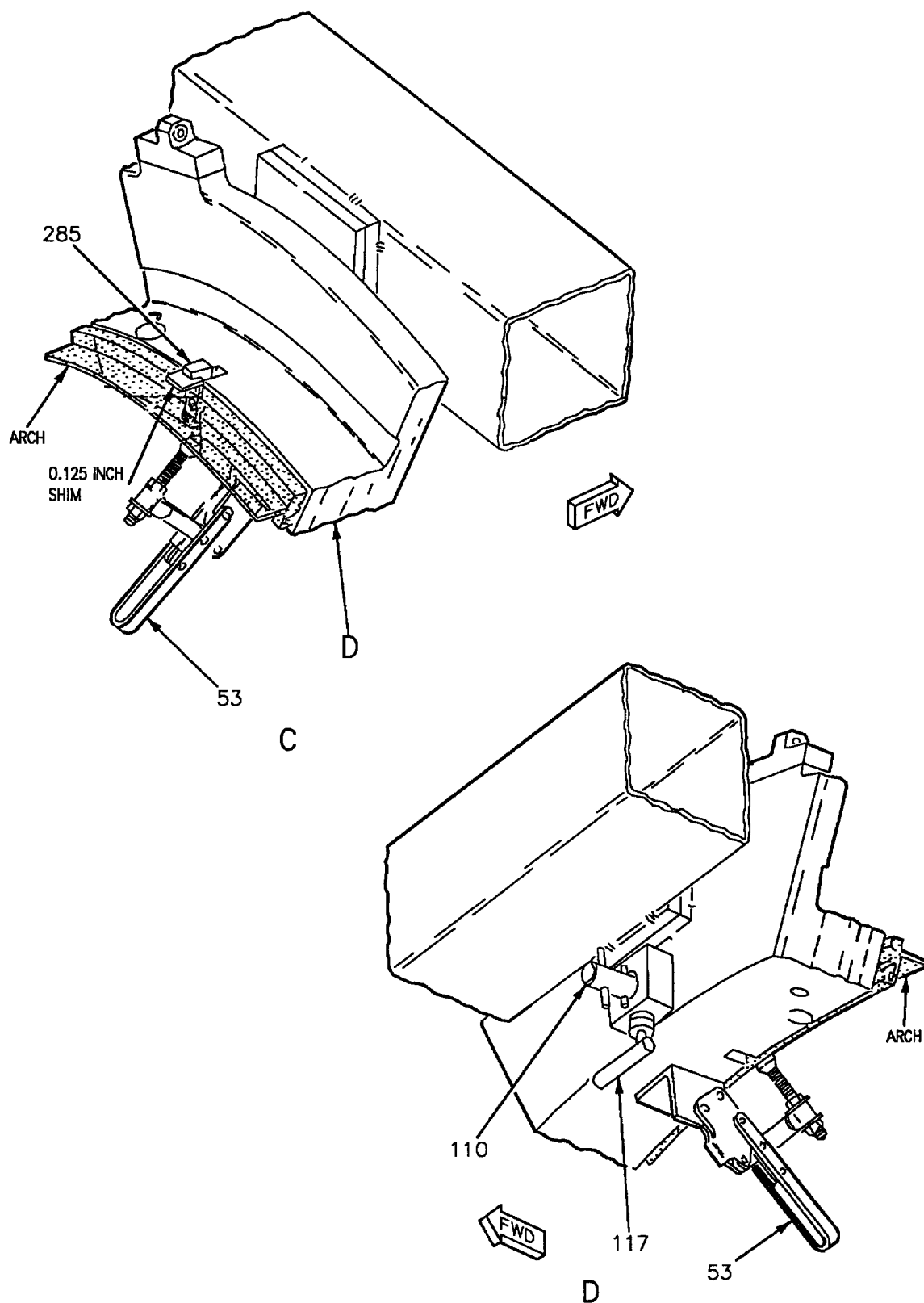


Figure 1. Inspection or Replacement - Arch (Sheet 3)

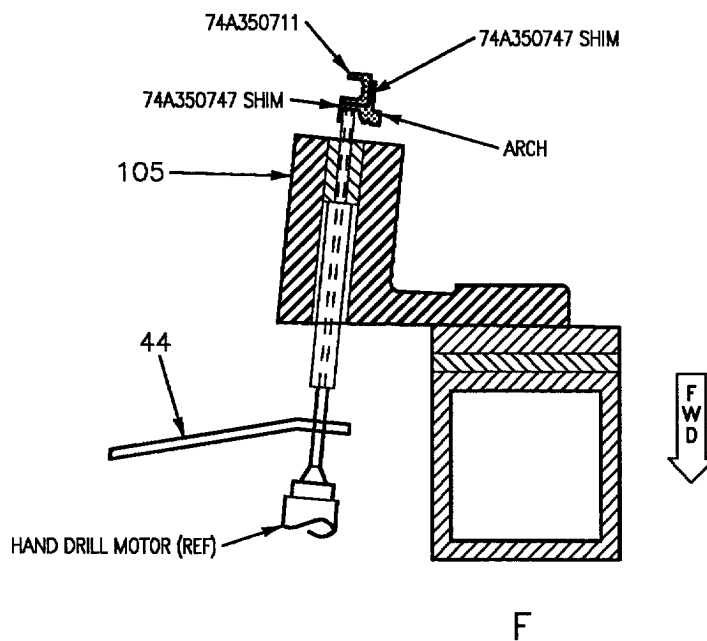
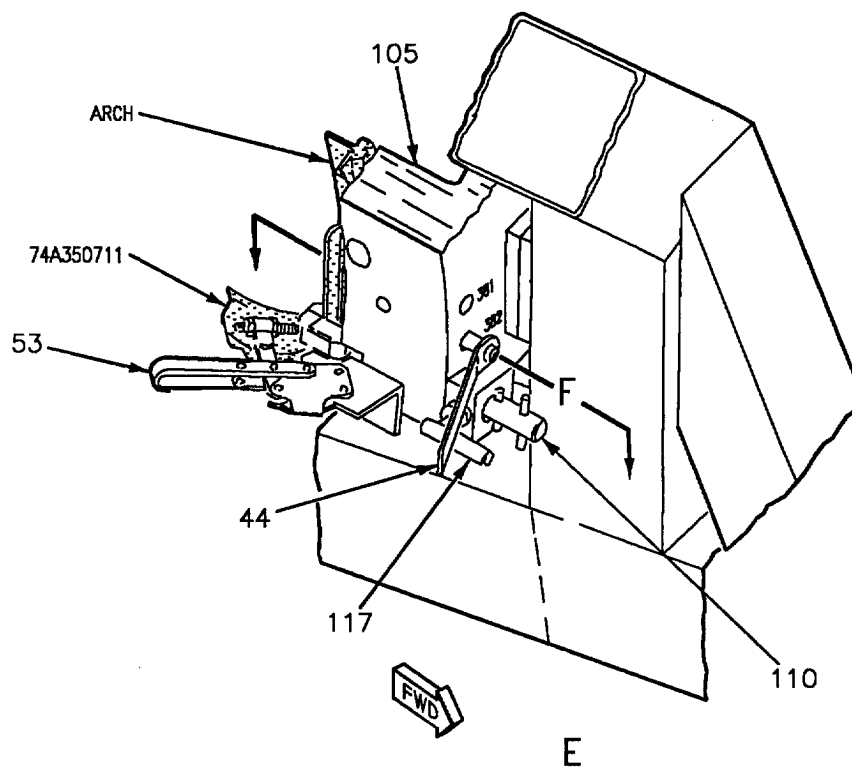
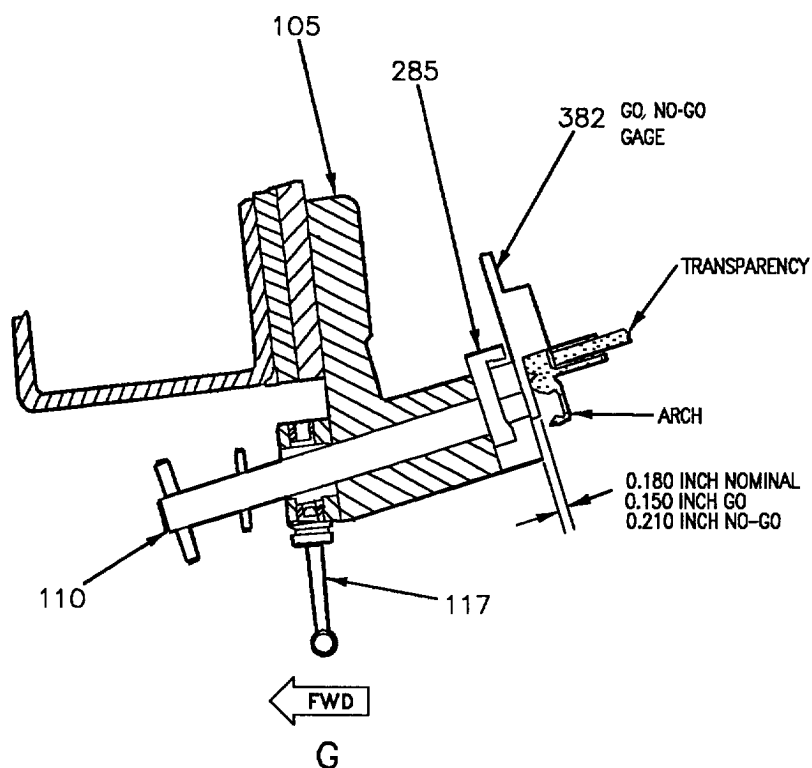


Figure 1. Inspection or Replacement - Arch (Sheet 4)



05020105

DETAIL NO.	NAME	FUNCTION
44	Traveler bushing	Locates canopy arch attachment holes two places on forward surface of canopy arch.
53	Toggle clamp	Secures canopy arch to arch locator (detail 285).
60	Traveler bushing	Guides 0.1285 inch diameter drill in first oversize hole.
62	Traveler bushing	Guides 0.1285 inch diameter drill in second oversize hole.
66	Traveler bushing	Guides 0.1285 inch diameter drill in nominal size hole.
105	Arch base	Contains various details for clamping, inspecting, and locating canopy arch.
110	T-pin	Supports and moves arch locator (detail 285).
117	L-pin	Retains T-pin (detail 110) and arch locator (detail 285).
285	Arch locator	Locates canopy arch on arch base (detail 105).
382	GO, NO-GO gage	Identifies “go” and “no-go” limits when inspecting canopy arch.

Figure 1. Inspection or Replacement - Arch (Sheet 5)

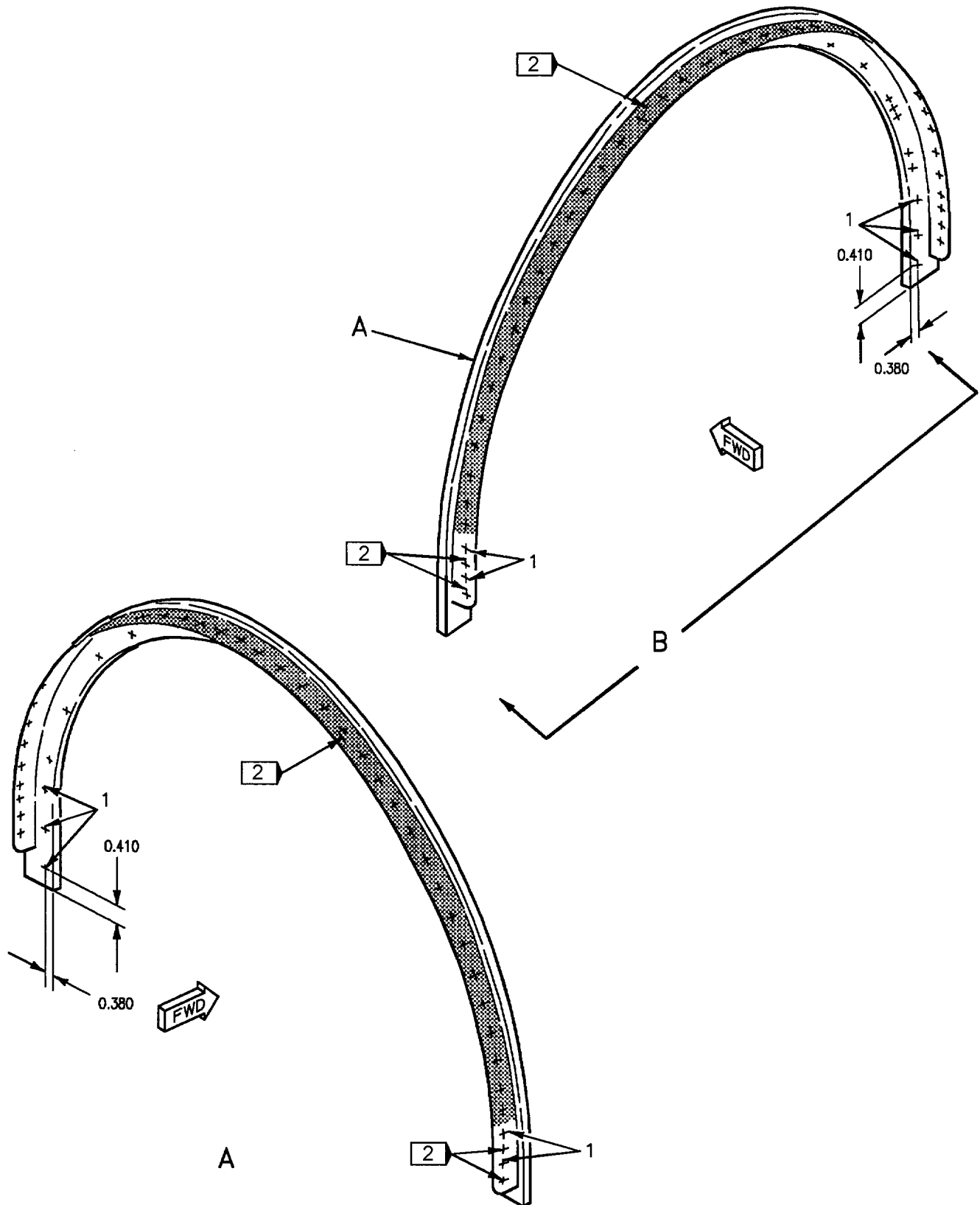
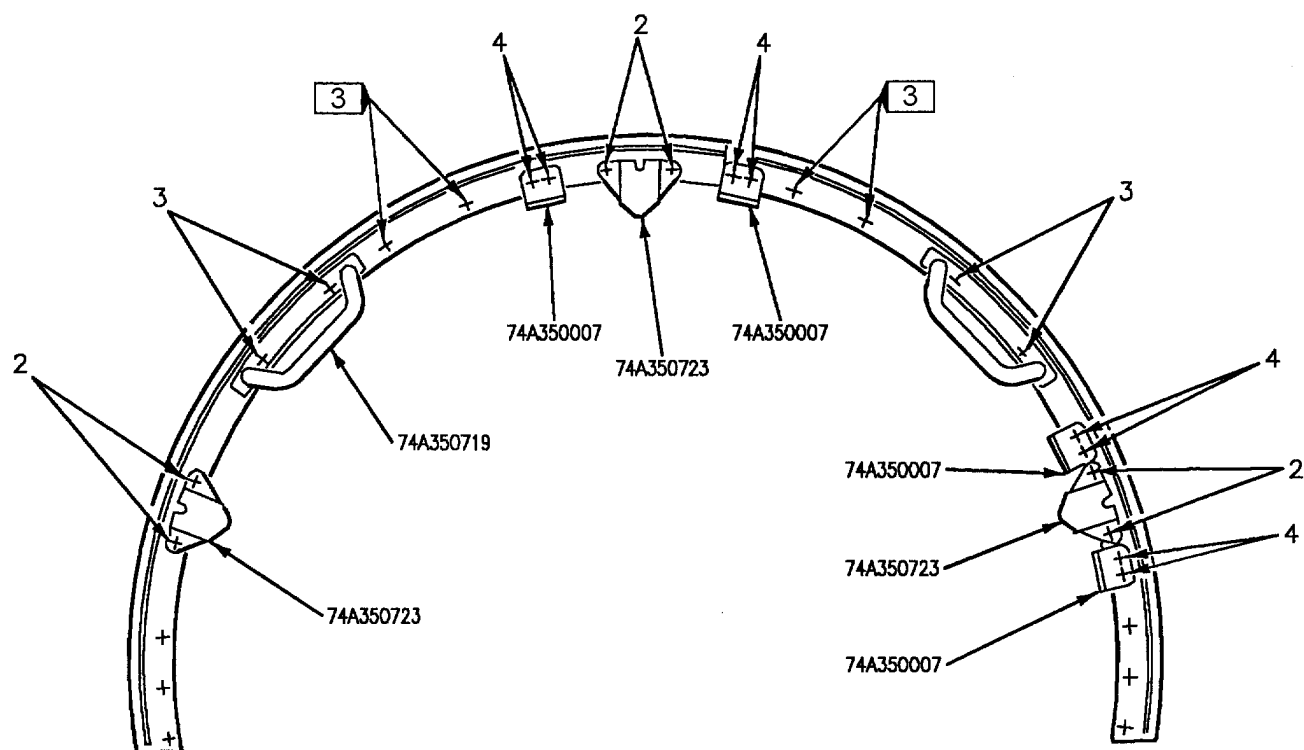


Figure 2. Arch, 74A350701, Fastener Index (Sheet 1)



VIEW LOOKING FORWARD

B

INDEX NO.	HOLE NO.	QTY	HOLE SIZE		FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1		10	0.1895 +0.0022 -0.0000		HLT311TA6-5			SW1000-6M
2		6	0.1635 +0.0025 -0.0000		HLT311TA5-3			SW1000-5M 05020202
3		4	0.195 +0.006 -0.000		NAS663V3HT	AN960C10L		NAS1291C3M
4		8	0.128 +0.006 -0.000		MS20426AD4			
LEGEND								
1	For oversize repair fasteners, see (A1-F18AC-SRM-200, WP004 07).							
2	Hole diameter is 0.196 +0.006 -0.000 at hole location 1 through 22 and 168 through 188.							
3	Hole diameter is 0.195 +0.007 -0.000.							

Figure 2. Arch, 74A350701, Fastener Index (Sheet 2)

4. CORNER FRAME, 74A350711, RE-PLACEMENT. See figure 3.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, Canopy	RE174350004-1
Repair Kit, Canopy	RE274350004- 1

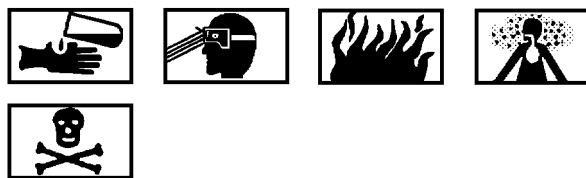
Materials Required

Nomenclature	Specification or Part Number
Adhesive	RTV-106
Cheesecloth	CCC-C-440, Type 1, Class 1
Methyl Ethyl Ketone	TT-M-261
Sealing Compound	MIL-S-83430, Class A-1/2



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

- Make sure canopy is loaded correctly and secure (WP005 01).
- Locate canopy in X plane location by rotating seal retainer locator pins (detail 219) in 74A350712 seal retainer, typical eight places, detail A.
- Secure seal retainer locator pins (detail 219) in position by inserting L-pins (detail 155 or 156), detail A.
- Remove transparency (WP005 03). Do canopy preparation (WP005 01).
- Remove fasteners attaching 74A350721 fairing, 74A350703 pin, 74A350720 support, 74A350701 arch, 74A350772 support assembly, 74A350726 side frame channel assembly, 74A350714 side frame, and 74A350702 forward seal guide to corner frame.
- Remove damaged corner frame.



Methyl Ethyl Ketone

5

g. Clean all residual sealing compound from mating structure using plastic scraper and cheesecloth moistened with methyl ethyl ketone.



Adhesive

12

h. Bond 74A350004 silicone rubber strip to new corner frame using adhesive.

i. Locate new corner frame to mating structure per substeps below:

- Install locator pin (detail 178), detail A.

NOTE

74A350747 shims are installed only when needed to maintain proper fit between corner frame and mating structure.

- Insert 74A350747 shims as required, details B, C, and D.



Sealing Compound

7

(3) Lay surface seal all mating surfaces between corner frame and mating structure, see details B, C, and D.

(4) Secure corner frame to 74A350701 arch with toggle clamp (detail 53), typical two places, detail E.

(5) Locate and drill holes in corner frame from mating structure, see figure 4 for fastener location and hole diameters.

(6) Wet install fasteners, see figure 4 and (A1-F18AC-SRM-200, WP011 00).

(7) Fillet seal areas indicated, detail D (A1-F18AC-SRM-200, WP011 00).

j. At hole location 20 through 27 and 163 through 170:

(1) Temporarily install transparency with enough fasteners to hold in correct position (WP005 03).

NOTE

If oversize fasteners were used in existing transparency, use traveler bushing (detail 60 or 62) to drill pilot holes in corner frame.

(2) Insert traveler bushing (detail 66) into existing holes of transparency.

(3) Drill 0.1285 inch diameter pilot holes.

(4) Remove transparency (WP005 03).

(5) Open pilot holes to 0.196 +0.006 -0.000 inch diameter nominal size or drill oversize as required to match existing hole in transparency.

k. Install transparency (WP005 03).

l. Apply finish system as required (A1-F18AC-SRM-500, WP021 00).

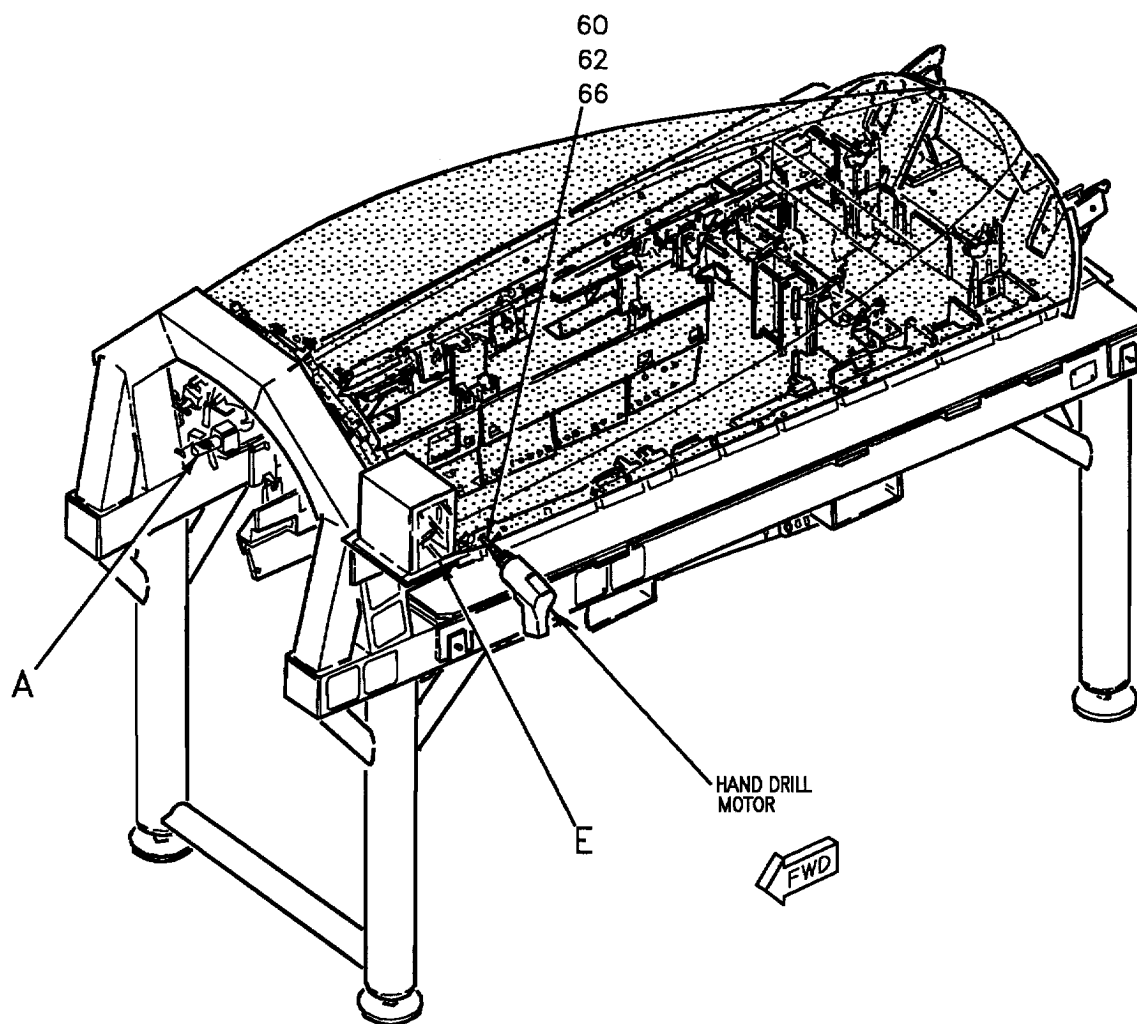


Figure 3. Replacement - Corner Frame (Sheet 1)

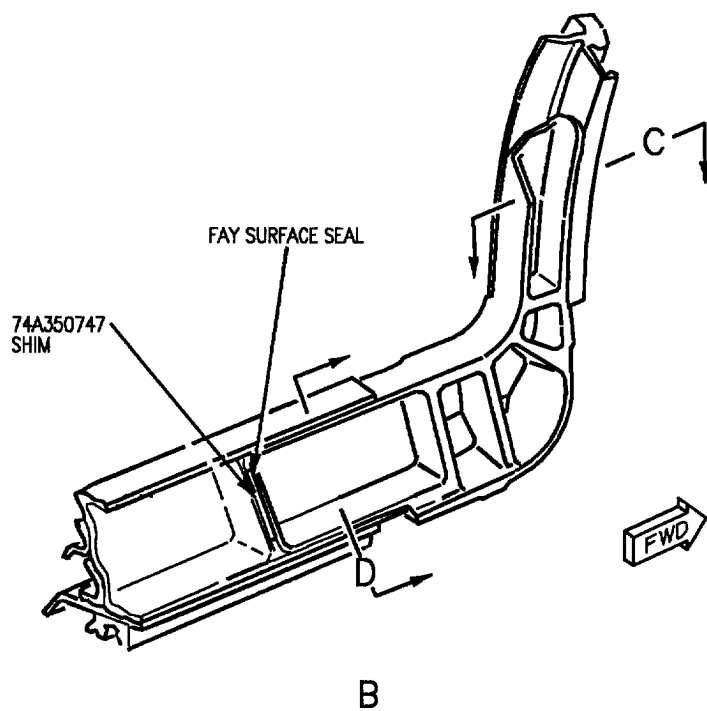
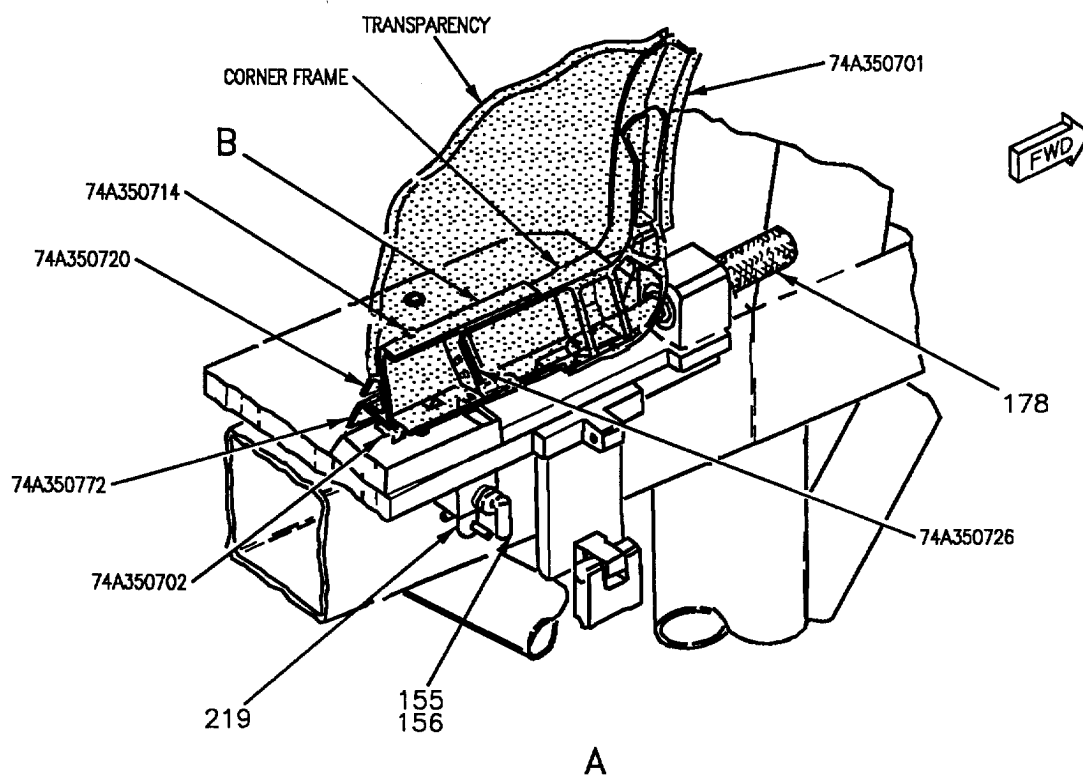


Figure 3. Replacement - Corner Frame (Sheet 2)

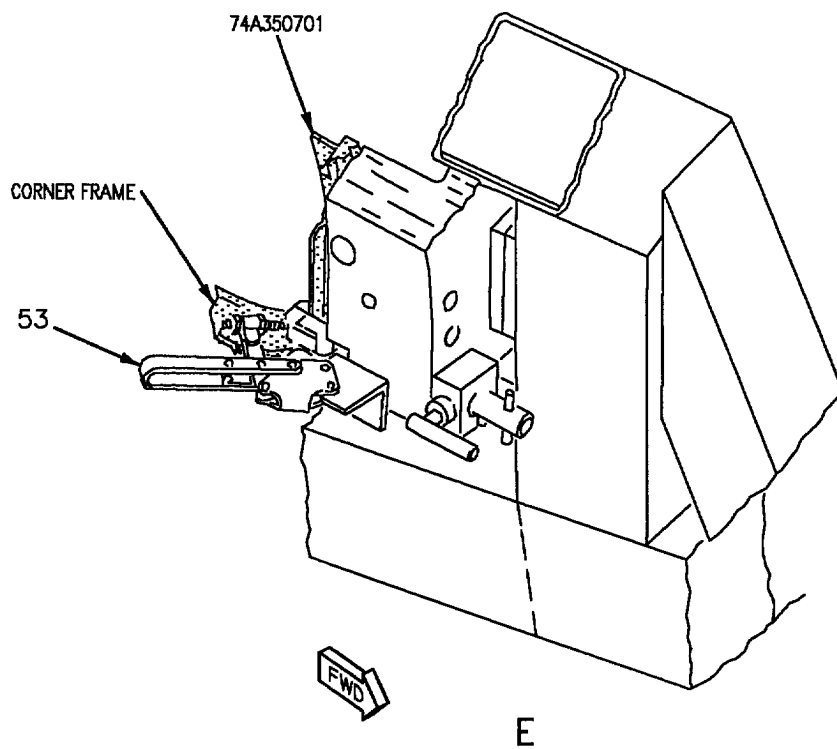
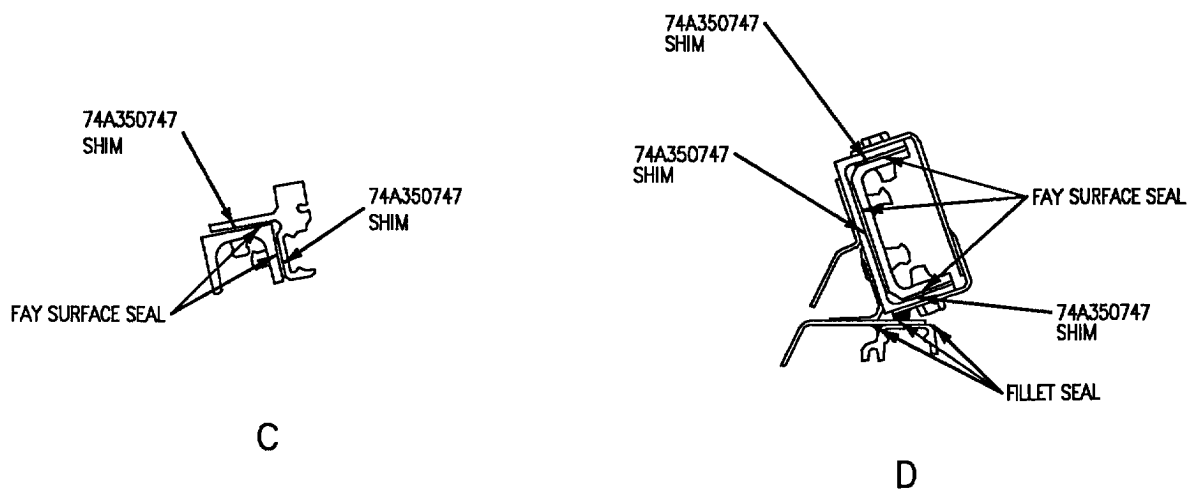


Figure 3. Replacement - Corner Frame (Sheet 3)

DETAIL NO.	NAME	FUNCTION
53	Toggle clamp	Secures corner frame to 74A350701 arch.
60	Traveler bushing	Guides 0.1285 inch diameter drill in first oversize hole.
62	Traveler bushing	Guides 0.1285 inch diameter drill in second oversize hole.
66	Traveler bushing	Guides 0.1285 inch diameter drill in nominal size hole.
155	L-pin	Secures seal retainer leader pin (detail 219) in position, four places.
156	L-pin	Secures seal retainer locator pin (detail 219) in position, four places.
178	Locator pin	Locates corner frame to mating structure.
219	Seal retainer locator pin	Locates in 74A350712 forward seal retainer to maintain X plane location for replacement of corner frame.

Figure 3. Replacement - Corner Frame (Sheet 4)

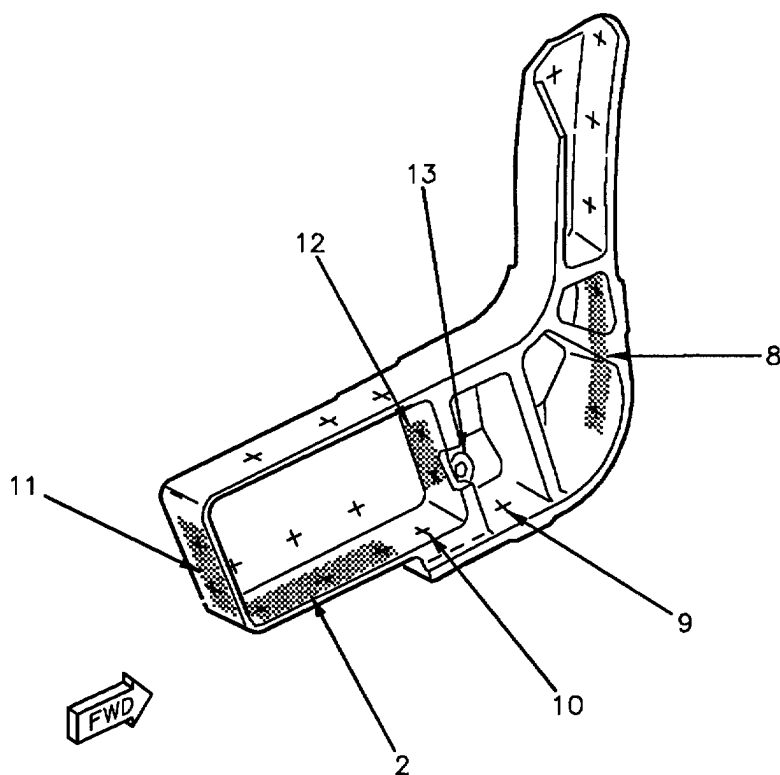
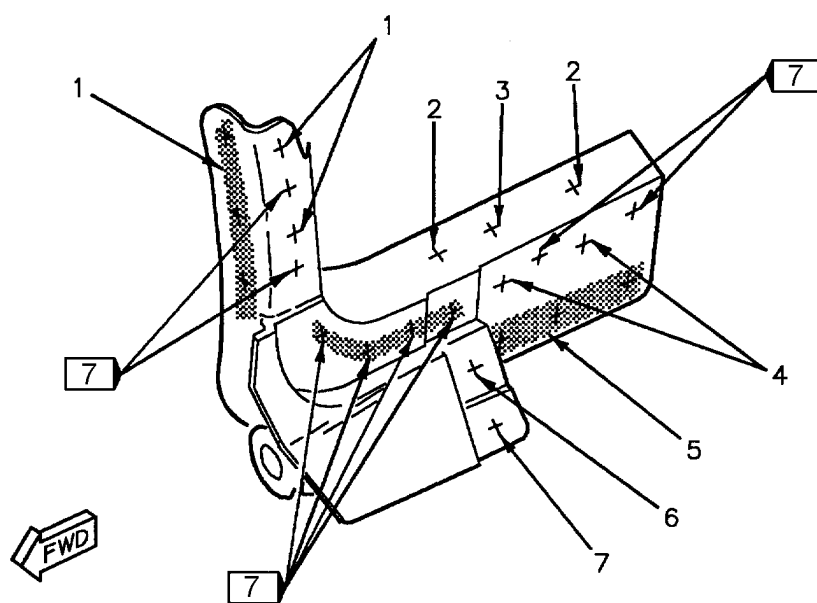


Figure 4. Corner Frame, 74A350711, Fastener Index (Sheet 1)















INDEX NO.	HOLE NO.	QTY	HOLE SIZE		FASTENER 	WASHER	SPACER BUSHING	RETAINER
1		10	0.1895 +0.0025 -0.0000		HLT311TA6-5			SW1000-6M
2		10	0.199 +0.003 -0.000		NAS1673-3L5			
3		1	0.199 +0.003 -0.000		NAS1673-3L5 			NS20212-02  
4		4	0.191 +0 006 -0.000		HLT311TA6-5			SW1000-6M
5		6	0.191 +0.006 -0.000		HLT310TA6-6			SW1000-6M
6		2	0.195 +0.007 -0.000		HT4041-3-3-5 			F50403-3-1 
7		2	0.195 +0.007 -0.000		HT4041-3-3-5 	NAS620C10L		NAS1291C3M
8		4	0.159 +0.005 -0.000		NAS1399C5A3			
9		2	0.159 +0.005 -0.000		NAS1399C5A7			
10		2	0.165 +0 003 -0.000		HLT311TA5-12	SW2000-5W		SW2000-5A
11		4	0.191 +0006 -0.000		HLT310TA6-5			SW1000-6M
12		4	0.166 +0.006 -0.000		HLT310TA5-5			SW1000-5M
13		2	0.191 + 0.006 -0.000		HLT310TA6-20			SW1000-6M
<p style="text-align: center;">LEGEND</p> <p> For oversize repair fasteners, see (A1-F18AC-SRM-200, WP004 07).</p> <p> Left side</p> <p> Right side.</p> <p> Attach plate nuts to structure with RV1241-3-3 rivets.</p> <p> Torque 15-25 in. lbs.</p> <p> Attach plate nuts to structure with 1415-0306 rivets.</p> <p> Hole diameter is 0.196 +0.006 -0.000 at hole location 20 through 27 and 163 through 170.</p>								

Figure 4. Corner Frame, 74A350711, Fastener Index (Sheet 2)

5. SIDE FRAME, 74A350714, REPLACE- MENT. See figure 5.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, Canopy	RE174350004- 1
Repair Kit, Canopy	RE274350004- 1

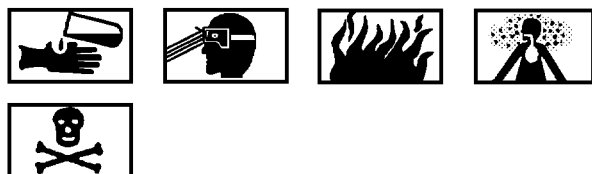
Materials Required

Nomenclature	Specification or Part Number
Cheesecloth	CCC-C-440, Type 1, Class 1
Methyl Ethyl Ketone	TT-M-261
Sealing Compound	MIL-S-83430, Class A-1/2



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

- a. Make sure canopy is loaded correctly and secure (WP005 01).
- b Remove transparency (WP005 03). Do canopy preparation (WP005 01).
- c. Remove fasteners securing side frame to mating structure. See figure 6 for fastener location.
- d. Remove damaged side frame.



Methyl Ethyl Ketone

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- e. Clean all residual sealing compound from mating structure using plastic scraper and cheesecloth moistened with methyl ethyl ketone.

- f. Locate new side frame per substeps below:

NOTE

74A350747 shims are installed only when needed to maintain proper fit between side frame, 74A350711 corner frame, and 74A350735 aft beam.

- (1) Insert 74A350747 shims as required, detail A, B, C, and D.



Sealing Compound

7

- (2) Lay surface seal all mating surfaces between side frame, 74A350711 corner frame and 74A350735 aft beam.

- (3) Position side frame over 74A350711 corner frame at forward end and over 74A350735 aft beam at aft end, detail A and B.

- (4) Position side frame in Y plane location by aligning aft inner surface of side frame with aft face of 74A350735 aft beam, detail B.

- (5) Position side frame in Z plane location by aligning aft inner surface of side frame flange with upper surface of flange on 74A350735 aft beam, detail B.

- g. Locate mating structure to side frame per substeps below:

- (1) Position locator assembly (detail 240 and 241) on fixture base (detail 143 and 144) by installing L-pins (detail 198) four places and secure by installing handknobs (detail 199) six places.

- (2) Retract L-pins (detail 155 and 156) and rotate locator pin (detail 219) until roll pin (detail 227) points forward and aft, detail E.

- (3) Raise locator pin (detail 219) until head contacts inner surface of 74A350712 seal retainer and rotate locator pin (detail 219) until roll pin (detail 227) points inboard and outboard, detail E.

- (4) Secure locator pin (detail 219) using L-pins (detail 155 and 156), detail E.

- (5) Install 0.125 inch shim between outboard surface of 74A350720 upper support fairing and locator (detail 415), detail F.

- (6) Install 0.125 shim between upper surface of side frame and locator (detail 243), C-clamp together, detail F.

NOTE

Lower surface of locators (detail 229 and 233) is EOP of transparency. 74A350720 upper fairing support should never contact this surface.

(7) Rotate locator (detail 229) in position and secure by installing L-pin (detail 155), detail G.

(8) Check for 0.125 inch setback between 74A350720 upper support fairing and locator (detail 229) at Y261.359, detail G.

(9) Rotate locator (detail 233) in position and secure by installing L-pin (detail 155), detail G.

(10) Check for 0.125 inch setback between 74A350720 upper support fairing and locator (detail 233) at Y284.248, detail G.

(11) Position locator (detail 278) on locator block (detail 315) by inserting L-pin (detail 156) and secure by installing handknob (detail 209), detail J.

(12) Check 0.125 inch setback between 74A350769 intercostal and locator (detail 278) at Y310.555, detail J.

(13) Position locator (detail 385) on locator block (detail 333) by inserting L-pin (detail 156), detail F.

(14) Install 0.188 inch shim between 74A350772 lower fairing support and locator block (detail 333), C-clamp together, detail F.

h. Locate and drill holes in side frame from 74A350711 corner frame and 74A350735 aft beam, see figure 6 for fastener location and hole diameters.

i. Wet install fasteners, see figure 6 and (A1-F18AC-SRM-200, WP011 00).

j. Locate and drill holes in side frame from 74A350726 side frame channel assembly, 74A350769 intercostals, 74A350720 upper support fairing, and 74A350772 lower support fairing. See figure 6 for fastener location and hole diameters.

k. At hole location 26 through 85 or 105 through 164:

(1) Rotate drill blanket (detail 22, 24 or 23, 25) in position and secure by installing L-pin (detail 369), typical eight places, see detail L.

(2) Make sure pin (detail 276) is net to side frame, typical three places each side, detail M.

(3) Remove locator assembly (detail 240 and 241).

(4) Remove mating structure from tool.

(5) Position subassembly C and D on fixture base (detail 143 and 144) by installing L-pins (detail 198) four places and secure with handknob (detail 199) six places, detail M.

(6) Temporarily install transparency with enough fasteners to hold in correct position (WP005 03).

(7) Tighten thumb screw (detail 262) to hold transparency against side frame and pins (detail 276), detail M.

NOTE

If oversize fasteners were used in existing transparency, use traveler bushing (detail 60 or 62) to drill pilot holes in side frame.

(8) Insert traveler bushing (detail 66) in existing holes of transparency.

(9) Drill 0.1285 inch diameter pilot holes.

(10) Remove transparency (WP005 03). Do canopy preparation (WP005 01).

(11) Open pilot holes to 0.196 +0.006 -0.000 inch diameter nominal size or drill oversize as required to match existing hole in transparency.

(12) Retract drill blanket (detail 22, 24 or 23, 25) by removing L-pin (detail 369), detail L.

(13) Remove subassembly C and D.



Sealing Compound

7

(14) Lay surface seal between side frame and mating structure (A1-F18AC-SRM-200, WP011 00).

(15) Wet install fasteners attaching mating structure to side frame, see figure 6 and (A1-F18AC-SRM-200, WP011 00).

(16) Fillet seal (A1-F18AC-SRM-200, WP011 00).

(17) Apply finish system (A1-F18AC-SRM-500, WP021 00).

l. Install transparency (WP005 03).

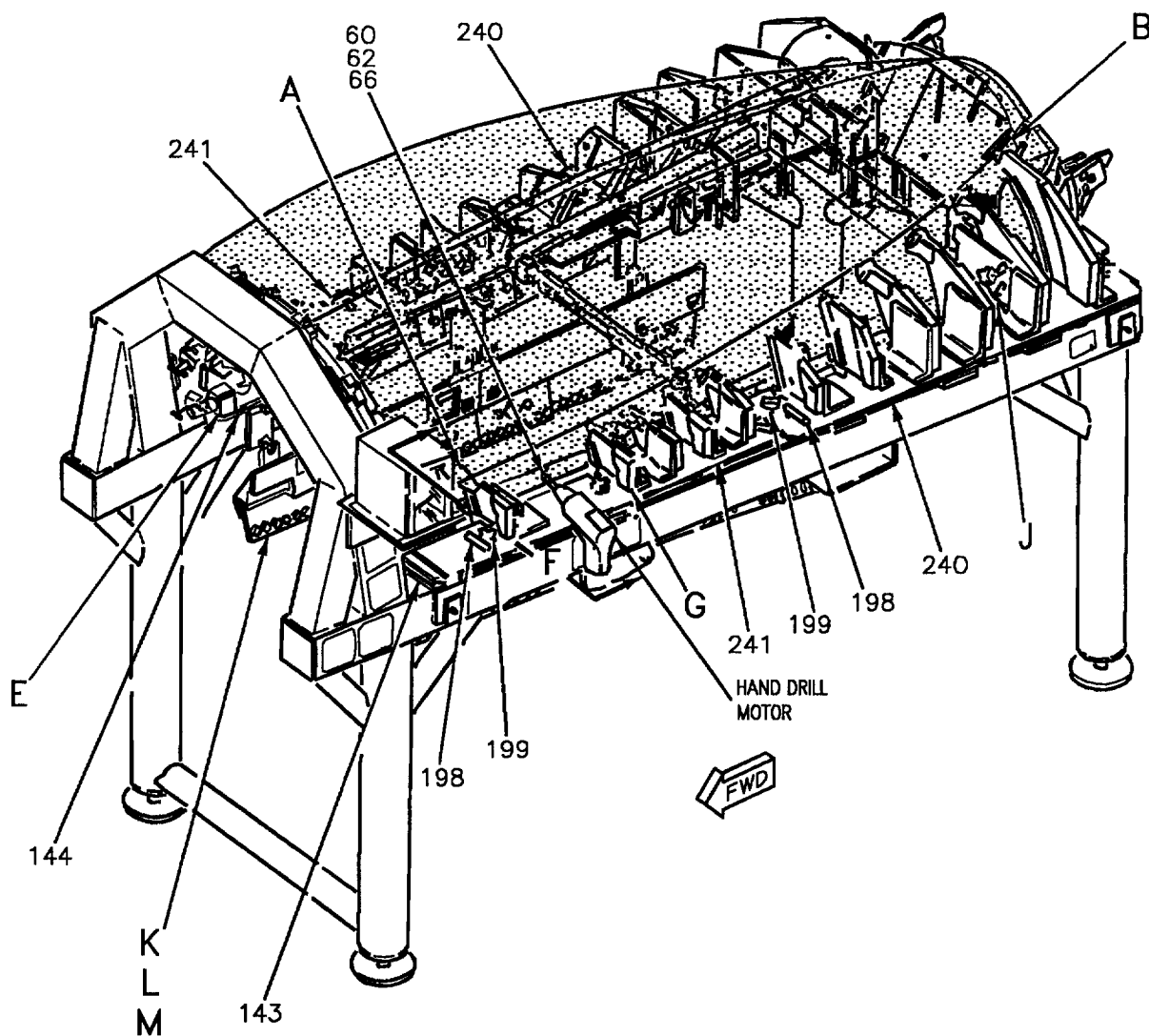


Figure 5. Replacement - Side Frame (Sheet 1)

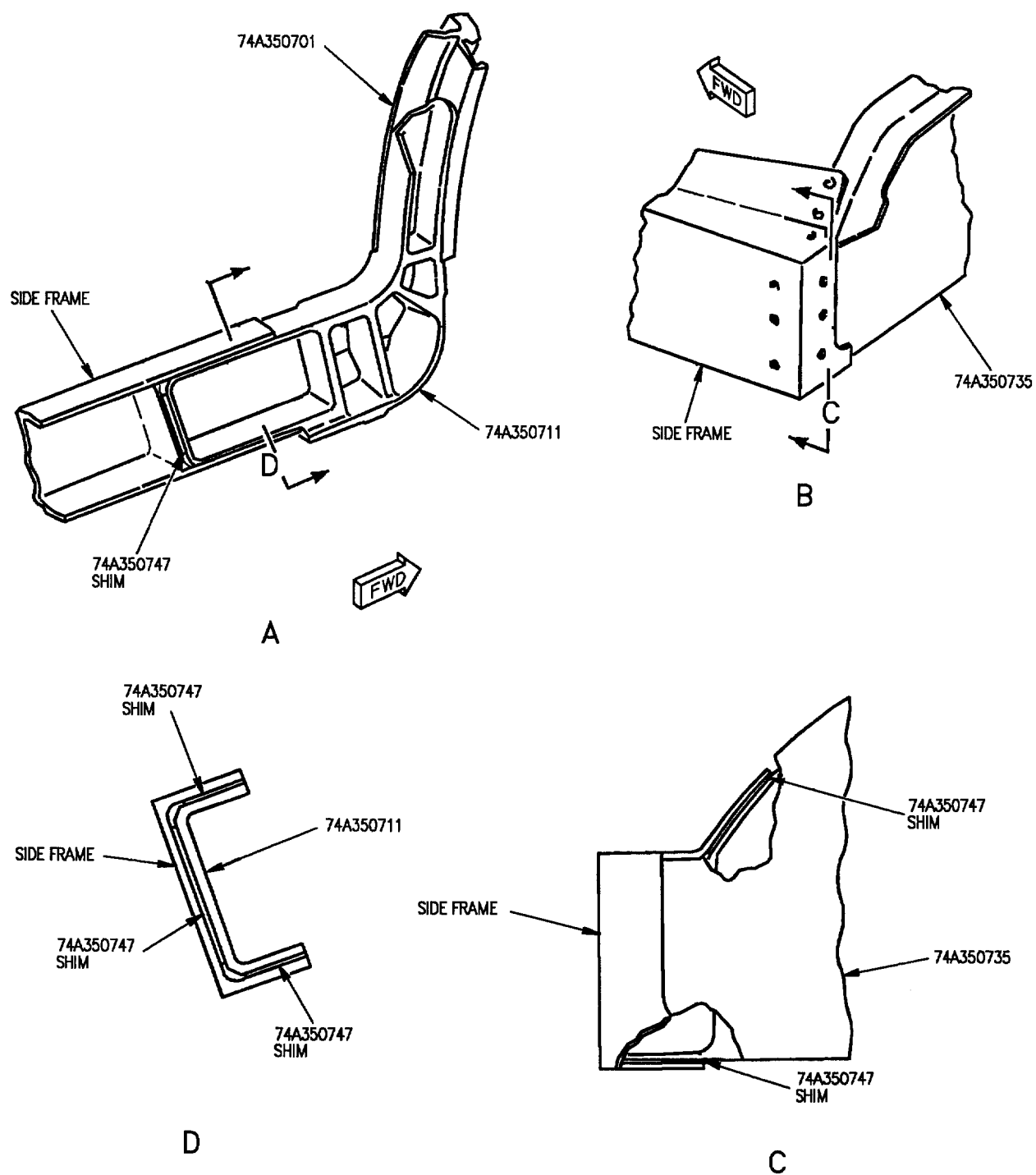


Figure 5. Replacement - Side Frame (Sheet 2)

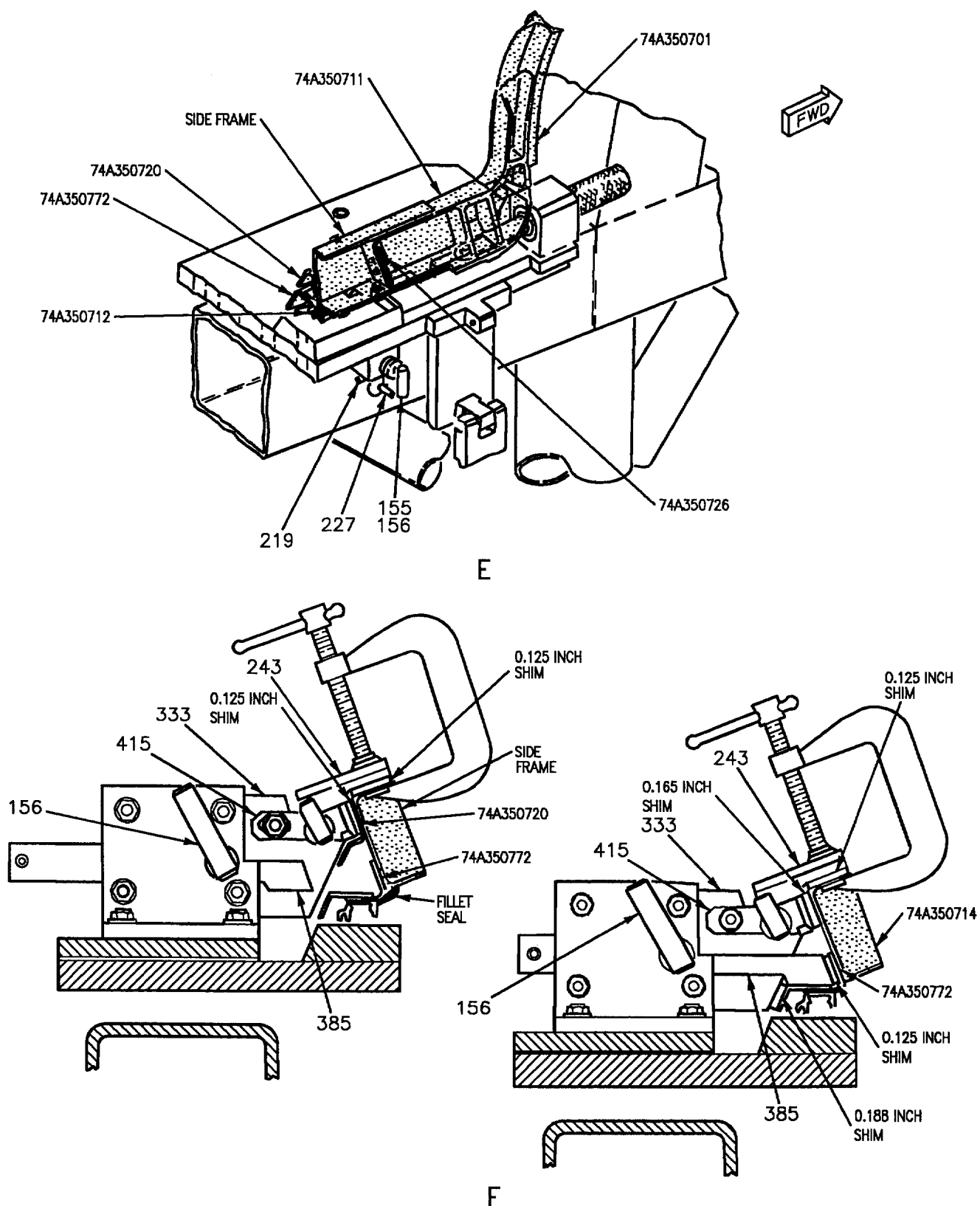
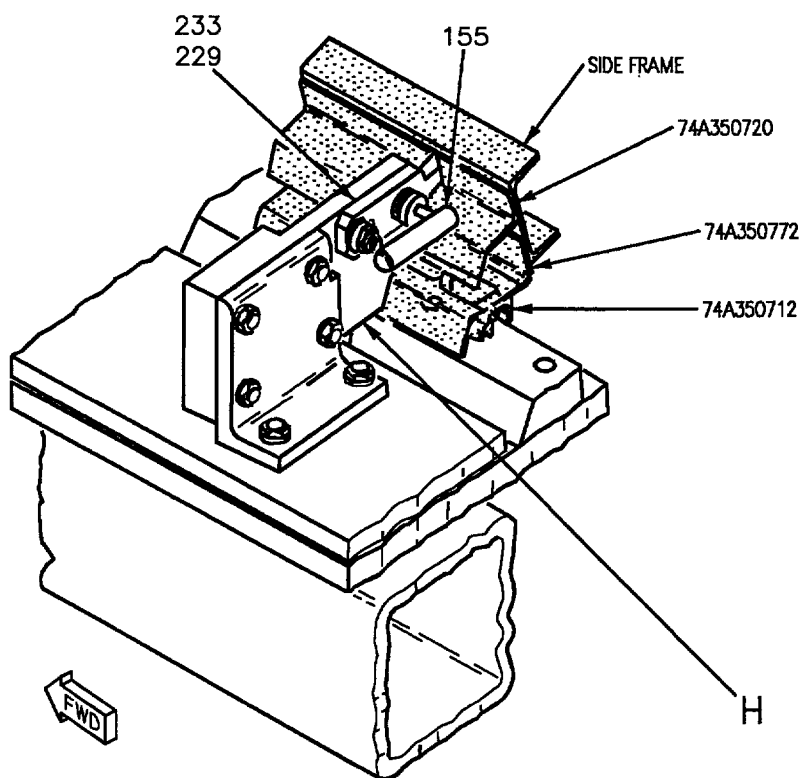


Figure 5. Replacement - Side Frame (Sheet 3)



G

Y261.359 SHOWN
Y284.248 TYPICAL

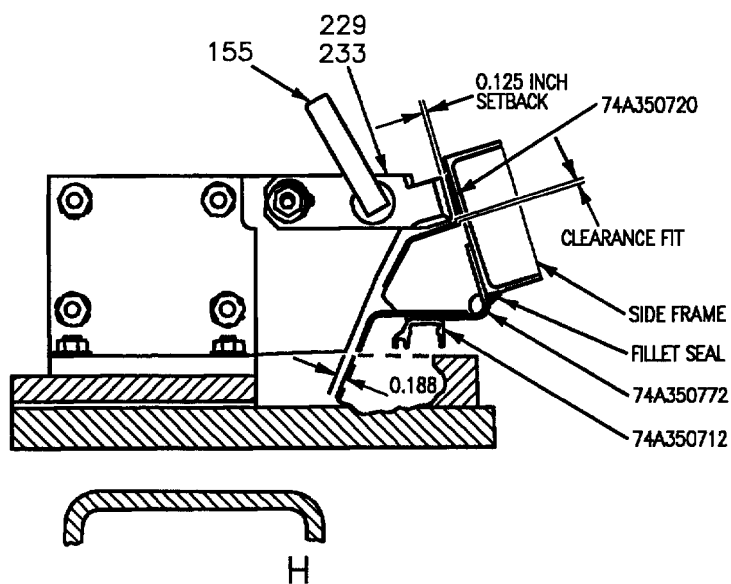


Figure 5. Replacement - Side Frame (Sheet 4)

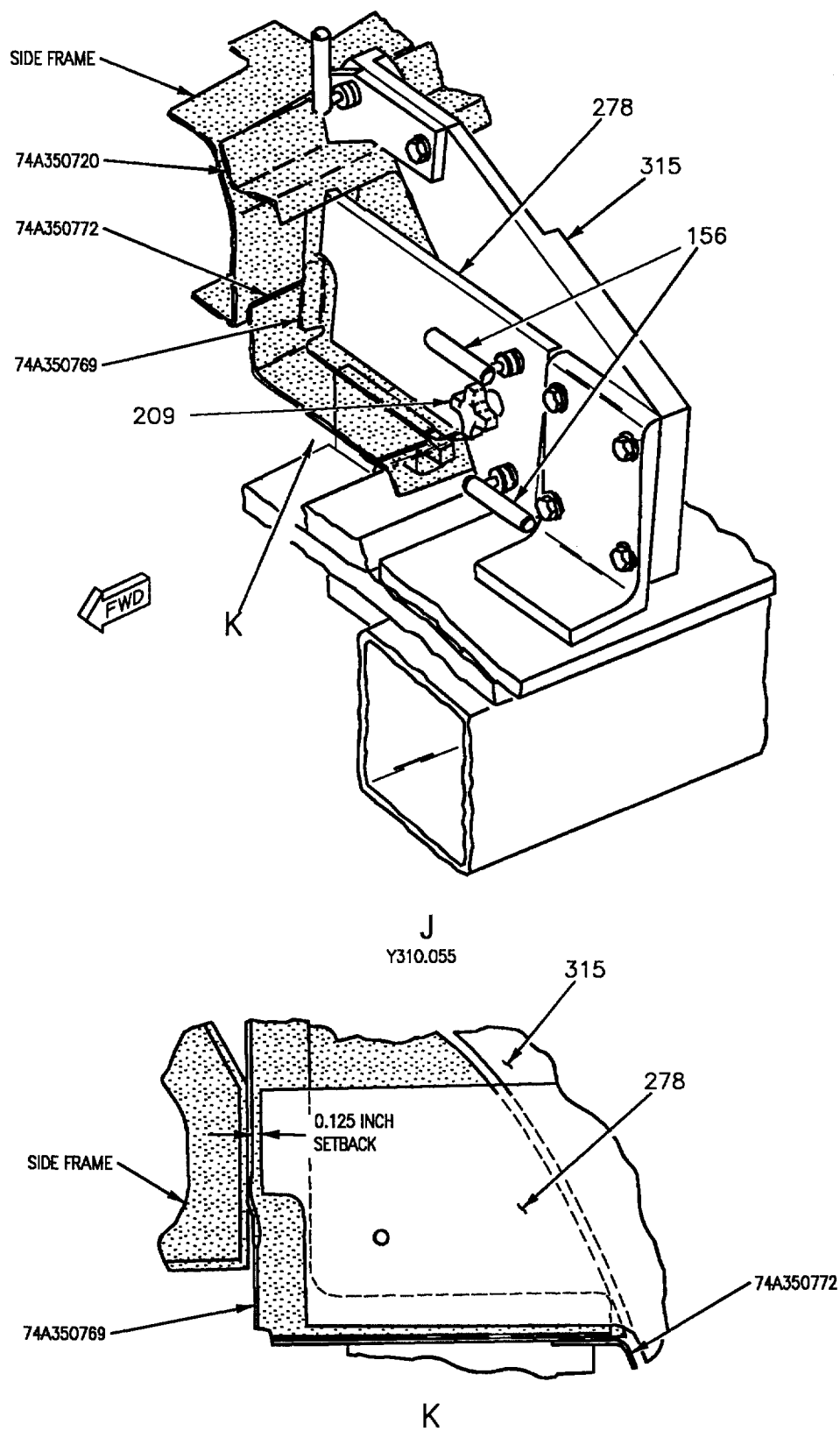


Figure 5. Replacement - Side Frame (Sheet 5)

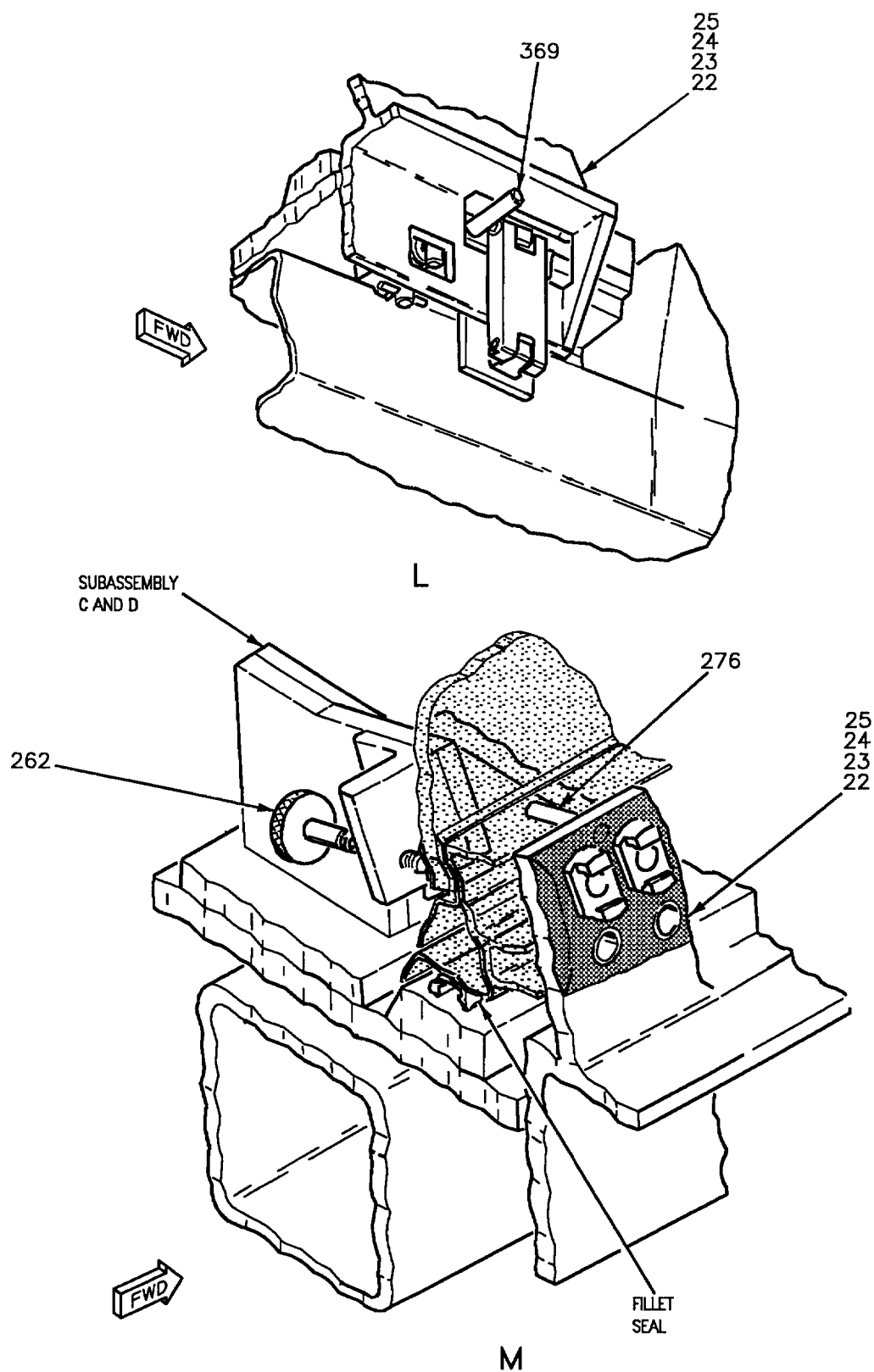


Figure 5. Replacement - Side Frame (Sheet 6)

DETAIL NO.	NAME	FUNCTION
Subassembly C and D	Clamp assembly	Clamps transparency to structure at side frame sections for drilling procedures.
22, 23, 24, 25	Drill blanket	Locates transparency attachment holes at forward half of side frame section and canopy latch hook attachment holes for drilling procedures.
60	Traveler bushing	Guides 0.1285 inch diameter drill in first oversize hole.
62	Traveler bushing	Guides 0.1285 inch diameter drill in second oversize hole.
66	Traveler bushing	Guides 0.1285 inch diameter drill in nominal size hole.
143, 144	Fixture base	Base of fixture to which locators mount.
155	L-pin	Positions locator (details 219, 229, and 233).
156	L-pin	Positions locator (details 278 and 385).
198	L-pin	Locates locator assembly (details 240, 241) and subassembly C and D.
199	Handknob	Secures locator assembly (details 240, 241) and subassembly C and D.
209	Handknob	Secures locator (detail 278) to locator block (detail 315).
219	Locator pin	Locates 74A350712 seal retainer.
227	Roll pin	Used as a handle and directional indicator for locator pin (detail 219).
229	Locator	Provides transparency limit location at Y261.359.
233	Locator	Provides transparency limit location at Y284.248.
240, 241	Locator assembly	Contains various locators for positioning and clamping 74A350772, 74A350720, 74A350769, 74A350721, and 74A350714.
243	Locator	Provides Z plane location on forward end of side frame.
262	Thumb screw	Secures transparency to side frame.
276	Pin	Keeps side frame in X plane location when engaging thumb screw (detail 262).
278	Locator	Provides X plane location at Y310.055.

Figure 5. Replacement - Side Frame (Sheet 7)

DETAIL NO.	NAME	FUNCTION
315	Locator block	Provides mold line reference and clamping ability at Y310.055.
333	Locator block	Provides mold line reference and clamping ability at Y246.194.
369	L-pin	Locates drill blanket (details 22, 23, 24, and 25).
385	Locator	Provides X plane location for 74A350772 and side frame.
415	Locator	Provides transparency limit location and X plane location for 74A350720 at Y246.194.

Figure 5. Replacement -Side Frame (Sheet 8)

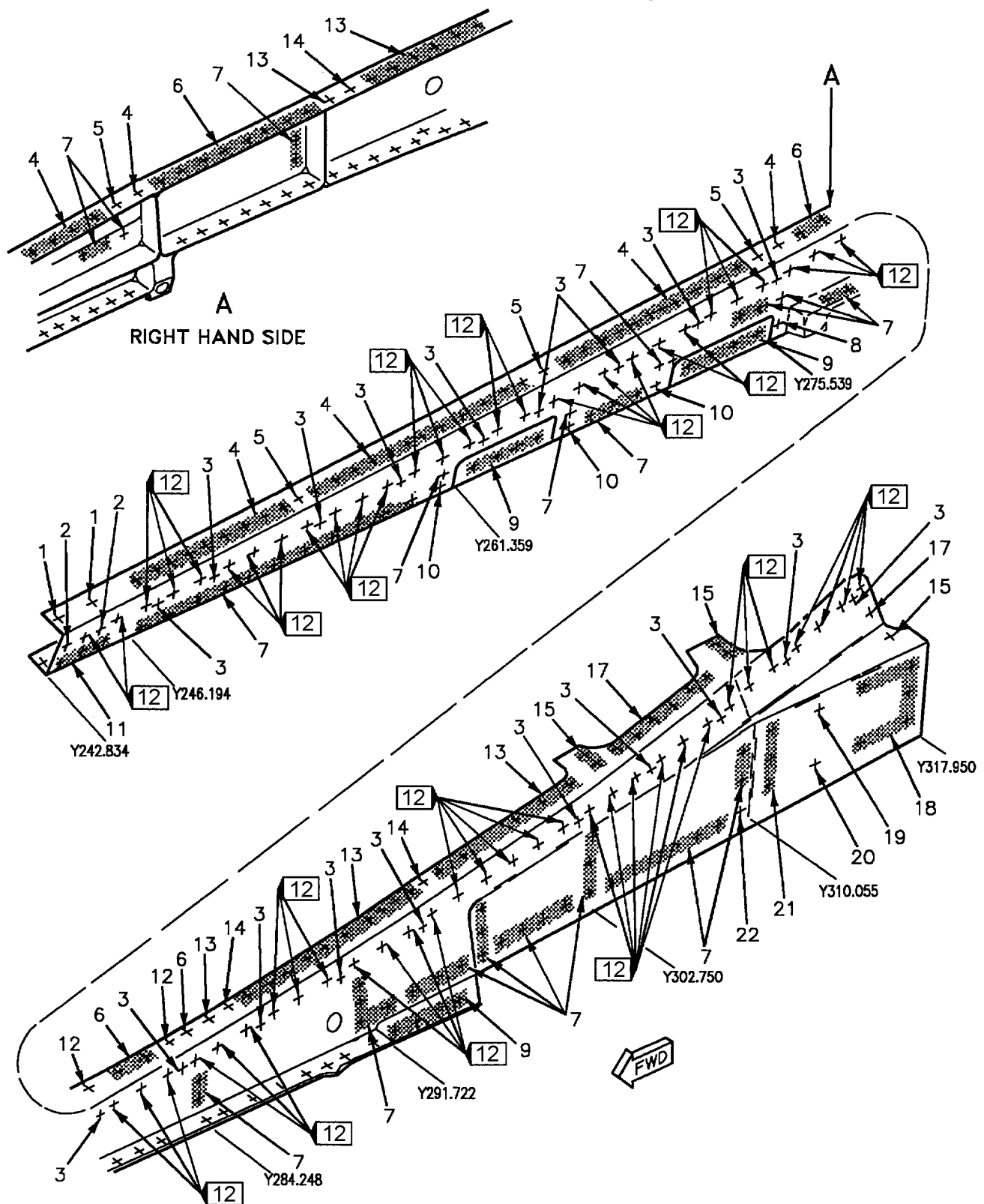


Figure 6. Side Frame, 74A350714, Fastener Index (Sheet 1)

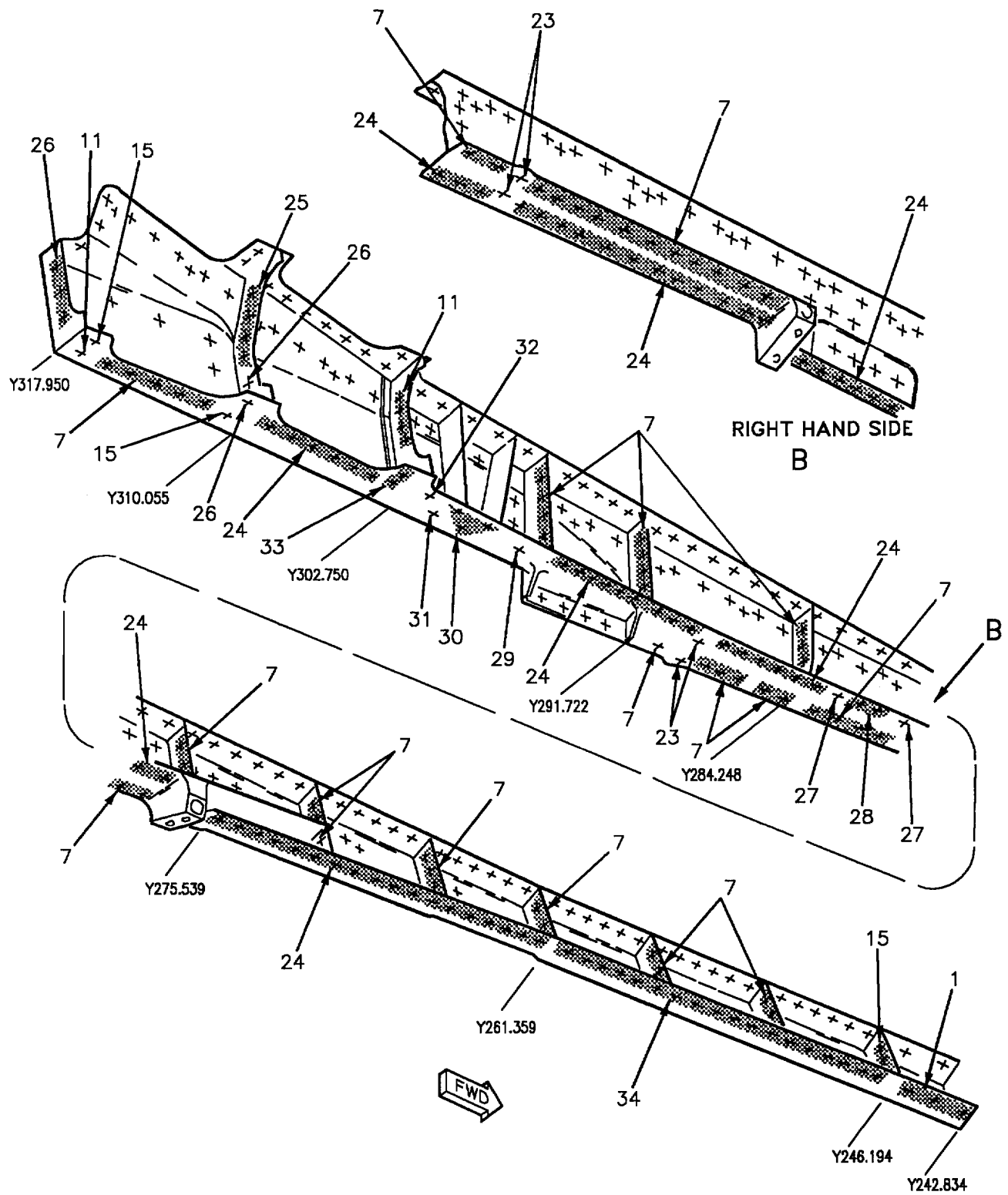


Figure 6. Side Frame, 74A350714, Fastener Index (Sheet 2)









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1		10	0.199 +0.003 -0.000		NAS1673-3L5			
2		4	0.191 +0.006 -0.000		HLT311TA6-5 			SW1000-6M
3		38	0.098 +0.005 -0.000		MS20426AD3			
4		66	0.165 +0.003 -0.000		NAS1673-08L2			
5		6	0.165 +0.003 -0.000		NAS1673-08L2 			F50405-08  
6		13	0.165 +0.003 -0.000		NAS1673-08L3			
7		152	0.161 +0.005 -0.000		MS20470AD5			
8		2	0.1635 +0.0022 -0.000		HLT312TA5-6			SW1000-5M
9	189 thru 212	24	0.257 +0.007 -0.000		NAS674V12 	AN960C416L		G18421JL2-4-8
10		6	0.1635 +0.0022 -0.000		HLT312TA5-3			SW1000-5M
11		16	0.191 +0.006 -0.000		HLT310TA6-6			SW1000-6M
12		2	0.165 +0.003 -0.000		NAS1673-08L4			
13		34	0.161 +0.003 -0.000		NAS1398C5-3			
14		2	0.161 +0.003 -0.000		NAS1398C5-3 			F50405-08  
15		14	0.191 +0.006 -0.000		HLT310TA6-5			SW1000-6M
16		12	0.192 +0.006 -0.000		CSR903B-6-7			
17		2	0.191 +0.006 -0.000		HLT310TA6-7			SW1000-6M

Figure 6. Side Frame, 74A350714, Fastener Index (Sheet 3)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE		FASTENER 1	WASHER	SPACER BUSHING	RETAINER
18		10	0.250 +0.006 -0.000		NAS674V7	8 AN960C416L 9 AN960C416		NAS1291C4M
19		1	0.250 +0.006 -0.000		NAS674V8 3 NAS674V5 4	AN960C416L 10		K50188-4 10695B4RET NAS1291C4M
20		1	0.250 +0.006 -0.000		NAS674V8 3 NAS674V5 4	AN960C416L 10 AN960C416L 10		NAS1291C4M NAS1291C4M
21		6	0.250 +0.006 -0.000		NAS674V5	AN960C416L 10		NAS1291C4M
22		2	0.1635 +0.0022 -0.000		HLT312TA5-5			SW1000-5M
23		4	0.196 +0.006 -0.000					F49249E3 11
24		85	0.161 +0.003 -0.000		NAS1398D5-3			
25		8	0.191 +0.006 -0.000		HLT310TA6-3			SW1000-6M
26		8	0.191 +0.006 -0.000		HLT310TA6-4			SW1000-6M
27		2	0.161 +0.003 -0.000		NAS1398D5-5			
28		2	0.161 +0.003 -0.000		NAS1398D5-4			
29	251,252	2	0.375 +0.007 -0.000	14	NAS676V14	AN960C616L		NAS1291C6M
30		6	0.161 +0.003 -0.000		NAS1398D5-6			
31	252,254	2	0.250 +0.006 -0.000	14	NAS674V14	AN960C416L		NAS1291C4M
32		2	0.165 +0.003 -0.000		NAS1671-08L6			
33		4	0.199 +0.003 -0.000		NAS1671-3L4			
34		36	0.161+ 0.003 -0.000		NAS1398D5-2			

Figure 6. Side Frame, 74A350714, Fastener Index (Sheet 4)
















INDEX NO.	HOLE NO.	QTY	HOLE SIZE		FASTENER 	WASHER	SPACER BUSHING	RETAINER
LEGEND								
					For oversize repair fasteners, see (A1-F18AC-SRM-200, WP004 07).			
					Countersink holes to flushness requirements of fastener.			
					Left side.			
					Right side.			
					Attach plate nut to structure with RV1241-3-2 rivets.			
					Torque 50-70 inch lbs.			
					Attach plate nut to structure with RV1241-3-3 rivets.			
					Install under bolt head.			
					Install under retainer.			
					Two required.			
					Attach plate nut to structure with 1415-0310 rivets.			
					Hole diameter is 0.196 +0.006 -0.000 at hole location 26 through 85 and 105 through 164.			
					See paragraph 16 for drilling information.			
					See paragraph 17 for drilling information.			

Figure 6. Side Frame, 74A350714, Fastener Index (Sheet 5)

6. LOWER FAIRING SUPPORT, 74A350772, INSPECTION AND REPLACEMENT. See figure 7.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, Canopy	RE174350004-1
Repair Kit, Canopy	RE274350004-1

Materials Required

Nomenclature	Specification or Part Number
Cheesecloth	CCC-C-440, Type 1, Class 1
Methyl Ethyl Ketone	TT-M-261
Sealing Compound	MIL-S-83430, Class A-1/2

7. INSPECTION.



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

- a. Make sure canopy is loaded correctly and secure (WP005 01).
- b. Remove 74A350721 fairing.
- c. Position locator assembly (detail 240, 241) on fixture base (detail 143, 144) by inserting L-pin (detail 198) four places, and secure by installing handknob (detail 199) six places.
- d. Inspect for 0.188 gap between outboard flange of lower fairing support and locator block (detail 333, 334, 331, 332, 329, 330, 327, 328, 325, 326, 323, 324, 321, 322, 319, 320, 317, 318, 315, 316, 313, and 314).
- e. Inspect for correct Z plane location at forward lower fairing support:

(1) Retract L-pin (detail 155, 156) and rotate locator pin (detail 219) until roll pin (detail 227) faces forward and aft, detail A.

(2) Raise locator pin (detail 219) until head of locator pin contacts inner surface of 74A350712 seal retainer.

(3) Inspect for 0.125 inch gap between dowel pin (detail 277) and pad (detail 362), typical eight places, detail B.

(4) Raise locator (detail 358) and secure with L-pin (detail 156) at location stamped, "PIN FOR 0.125 SETBACK," typical two places, detail C.

(5) Inspect for 0.125 inch setback between aft end of forward lower fairing support and locator (detail 223), detail D.

f. Inspect for correct Z plane location at aft lower fairing support:

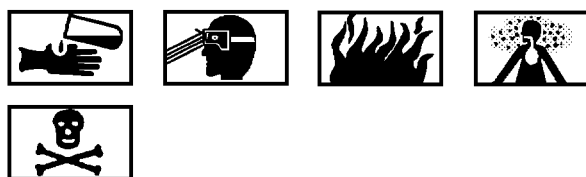
(1) Raise locators (detail 358, 365, and 366) and secure with L-pin (detail 156) at location stamped, "PIN FOR 0.125 SETBACK," typical six places, detail C.

(2) Inspect for 0.125 inch setback between upper surface of locators (details 358, 365, and 366) and lower surface of aft lower fairing support, detail D.

8. REPLACEMENT.

a. Remove fasteners attaching forward and/or aft lower fairing supports to mating structure. See figure 8 for fastener location.

b. Remove damaged forward and/or aft fairing supports.



Methyl Ethyl Ketone

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c. Clean all residual sealing compound from mating structure with a plastic scraper and cheesecloth moistened with methyl ethyl ketone.

d. Locate new forward lower fairing support:

(1) Raise locator pin (detail 219) inside 74A350712 seal retainer, rotate pin 90° so roll pin (detail 227) points inboard and outboard, detail A.

(2) Secure locator pin (detail 219) by inserting L-pins (detail 155, 156), typical eight places, detail A.

(3) Raise locator (detail 358) and secure with L-pin (detail 156) at location stamped, "PIN FOR NET," typical two places, detail C.

(4) Make sure forward lower fairing support assembly rests on 74A350712 seal retainer.

(5) Make sure aft end of forward lower fairing support is net to locator (detail 223), detail D.

(6) Make sure inboard flange of forward lower fairing support is net to 74A350714 side frame.

(7) Insert 0.188 inch shim between outboard flange of forward lower fairing support and locator block (detail 333, 334, 331, 332, 329, 330, 327, 328, 325, 326, 323, 324, 321, 322, 319, and 320), C-clamp together, typical sixteen places, detail E.

(8) Mate drill holes in forward lower fairing support using existing holes in mating structure as guide. See figure 8 for fastener location and hole diameter.

e. Locate new aft lower fairing support:

(1) Raise locator (detail 358, 365, and 366) and secure with L-pin (detail 156) at location stamped "PIN FOR NET," typical six places, detail C.

(2) Make sure aft lower fairing support is net on locators (detail 358, 365, and 366), detail D.

(3) Make sure inboard flange of aft lower fairing support is net to 74A350714 side frame.

(4) Insert 0.188 inch shim between outboard flange of aft lower fairing support and locator block (detail 317, 318, 315, 316, 313, and 314), C-clamp together, typical six places, detail E.

(5) Mate drill holes in aft lower fairing support using existing holes in mating structure as guide. See figure 8 for fastener location and hole diameter.



Methyl Ethyl Ketone

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f. Lay surface seal between forward and/or aft lower fairing support and mating structure (A1-F18AC-SRM-200, WP011 00).

g. Wet install fasteners attaching forward and/or aft lower fairing support to mating structure. See figure 8 and (A1-F18AC-SRM-200, WP011 00).

h. Fillet seal (A1-F18AC-SRM-200, WP011 00).

i. Apply finish system (A1-F18AC-SRM-500, WP021 00).

j. Install 74A350721 fairing.

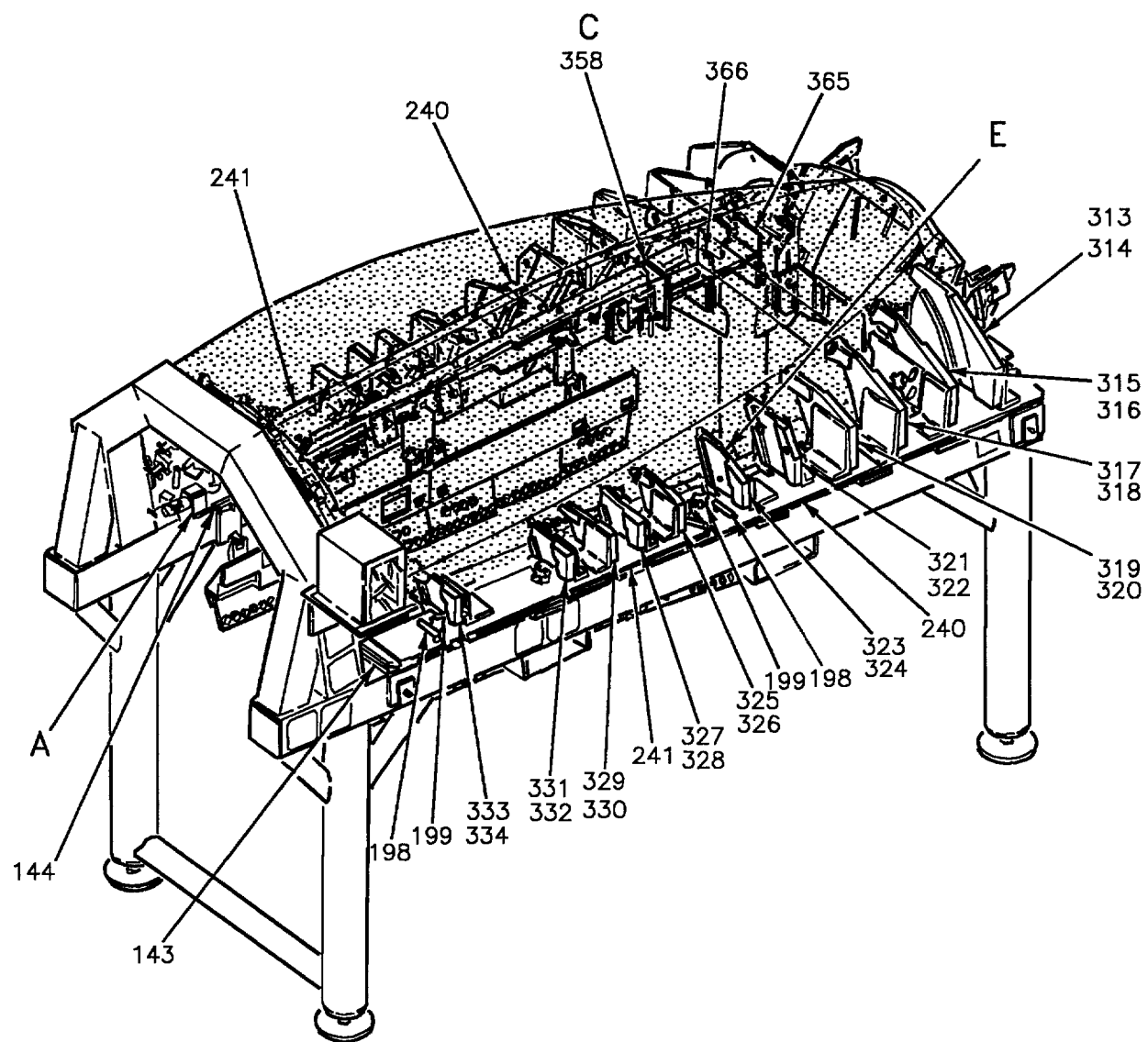


Figure 7. Inspection or Replacement - Lower Fairing Support (Sheet 1)

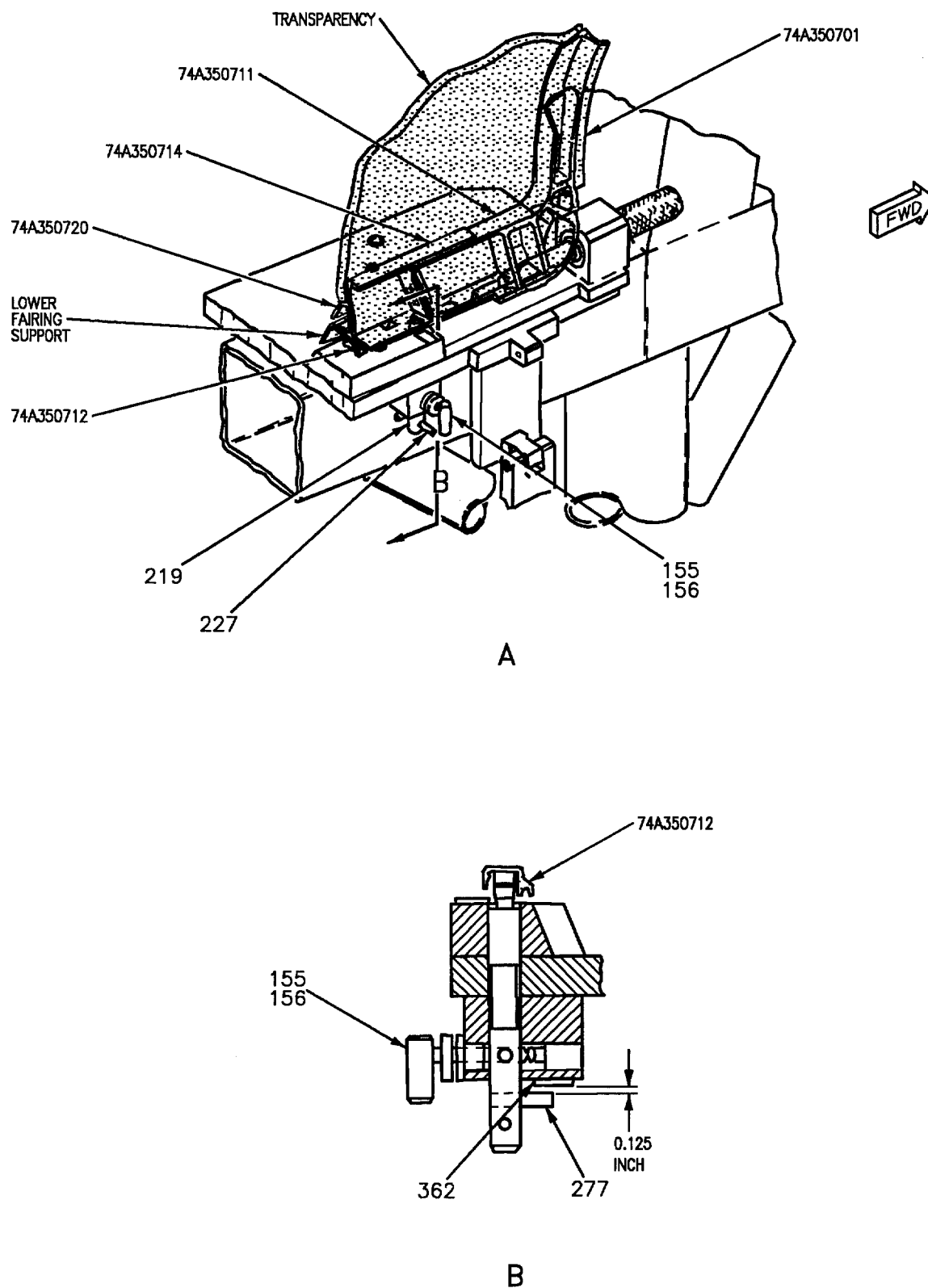


Figure 7. Inspection or Replacement - Lower Fairing Support (Sheet 2)

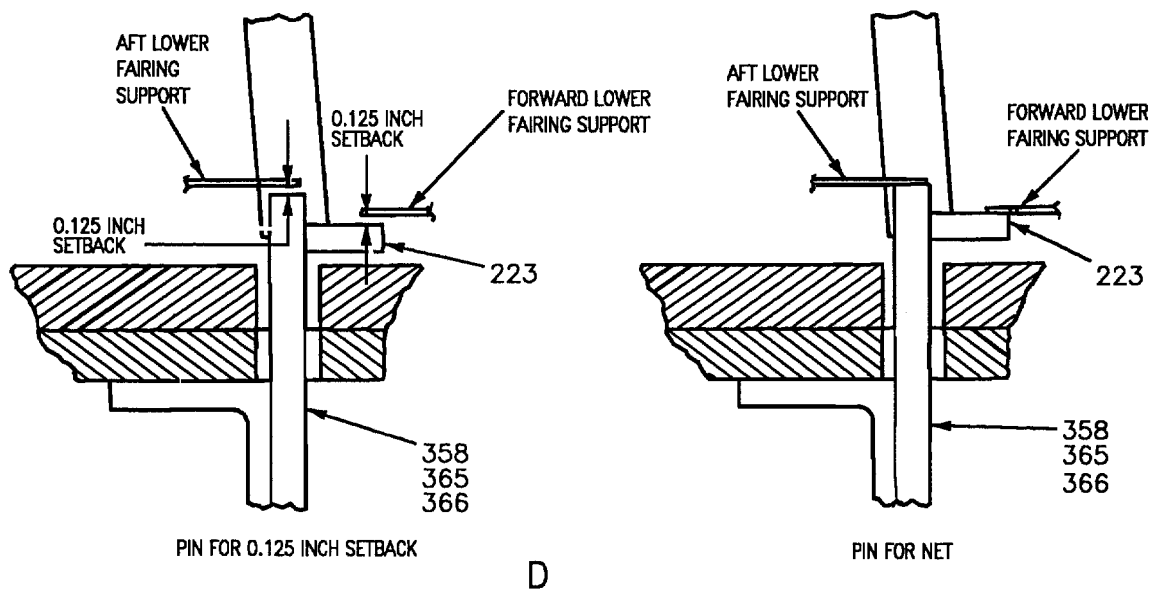
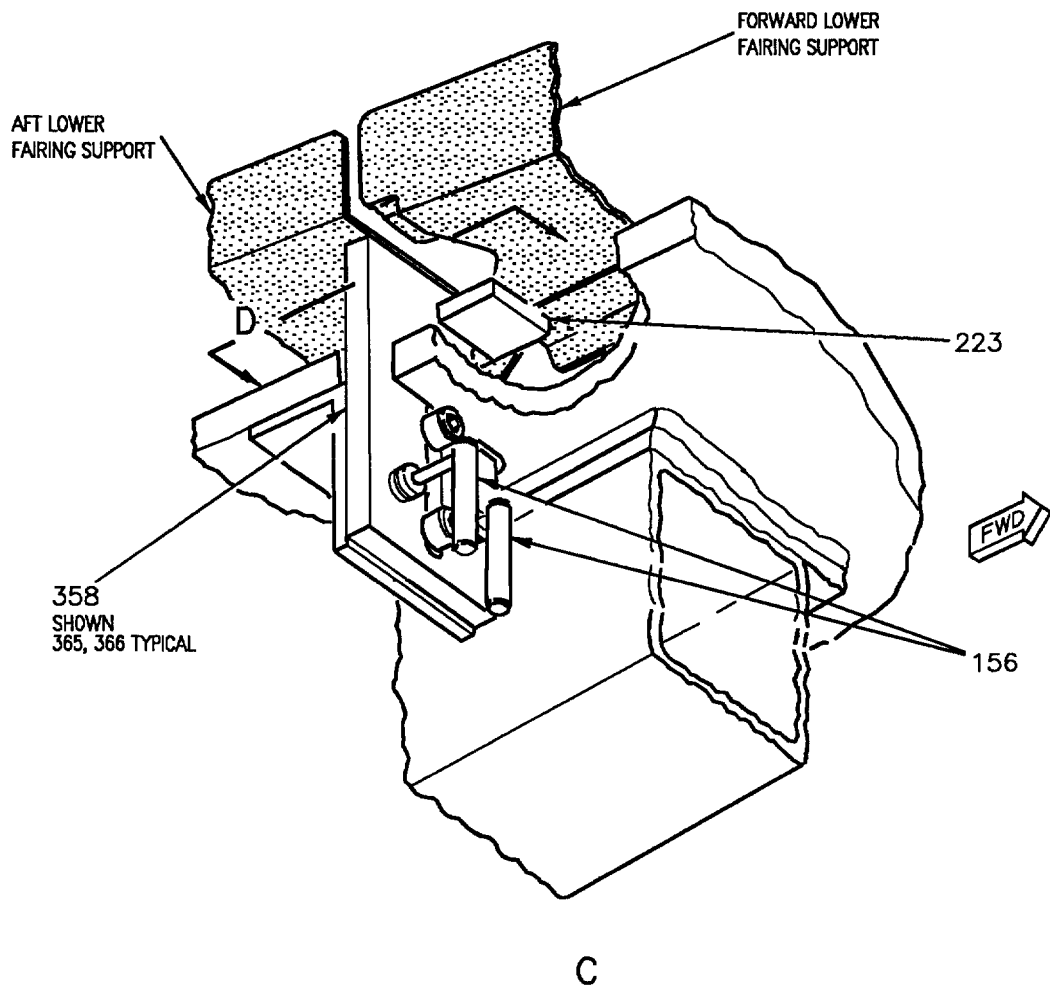


Figure 7. Inspection or Replacement - Lower Fairing Support (Sheet 3)

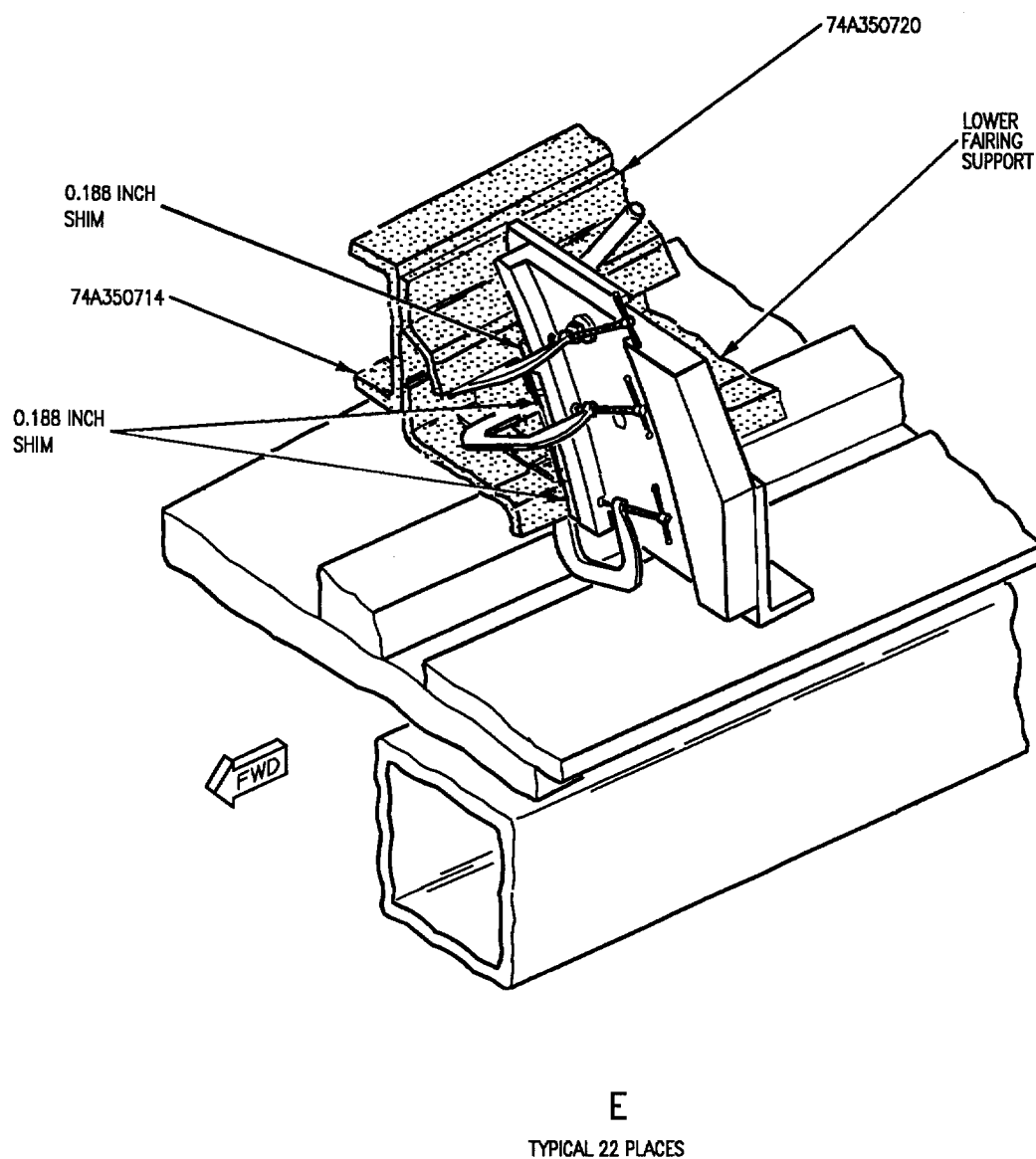


Figure 7. Inspection or Replacement - Lower Fairing Support (Sheet 4)

DETAIL NO.	NAME	FUNCTION
143, 144	Base	Base of fixture to which most locators mount.
155	L-pin	Locates locator pin (detail 219).
156	L-pin	Locates locator (detail 219, 358, 365, and 366).
198	L-pin	Locates locator assembly (detail 240 and 241).
199	Handknob	Secures locator assembly (detail 240 and 241).
219	Locator pin	Locates 74A350712 seal retainer.
223	Locator	Provides Z plane location for forward lower fairing support.
227	Roll pin	Used as a handle and directional indicator for locator pin (detail 219).
240, 241	Locator assembly	Contains various locators for positioning and clamping lower fairing support.
277	Dowel pin	Provides 0.125 inch setback for locating 74A350712 seal retainer.
313, 314	Locator block	Provides mold line reference and clamping ability at Y317.950.
315, 316	Locator block	Provides mold line reference and clamping ability at Y310.055.
317, 318	Locator block	Provides mold line reference and clamping ability at Y302.650.
319, 320	Locator block	Provides mold line reference and clamping ability at Y296.538.
321, 322	Locator block	Provides mold line reference and clamping ability at Y291.754.
323, 324	Locator block	Provides mold line reference and clamping ability at Y284.289.
325, 326	Locator block	Provides mold line reference and clamping ability at Y275.501.
327, 328	Locator block	Provides mold line reference and clamping ability at Y270.982.
329, 330	Locator block	Provides mold line reference and clamping ability at Y265.971.

Figure 7. Inspection or Replacement - Lower Fairing Support (Sheet 5)

DETAIL NO.	NAME	FUNCTION
331, 332	Locator block	Provides mold line reference and clamping ability at Y261.359.
333, 334	Locator block	Provides mold line reference and clamping ability at Y246.191.
358	Locator	Provides Z plane location at Y302.650.
362	Pad	Machined surface used for checking 0.125 inch setback from dowel pin (detail 277).
365	Locator	Provides Z plane location at Y317.950.
366	Locator	Provides Z plane location at Y310.055.

Figure 7. Inspection or Replacement - Lower Fairing Support (Sheet 6)

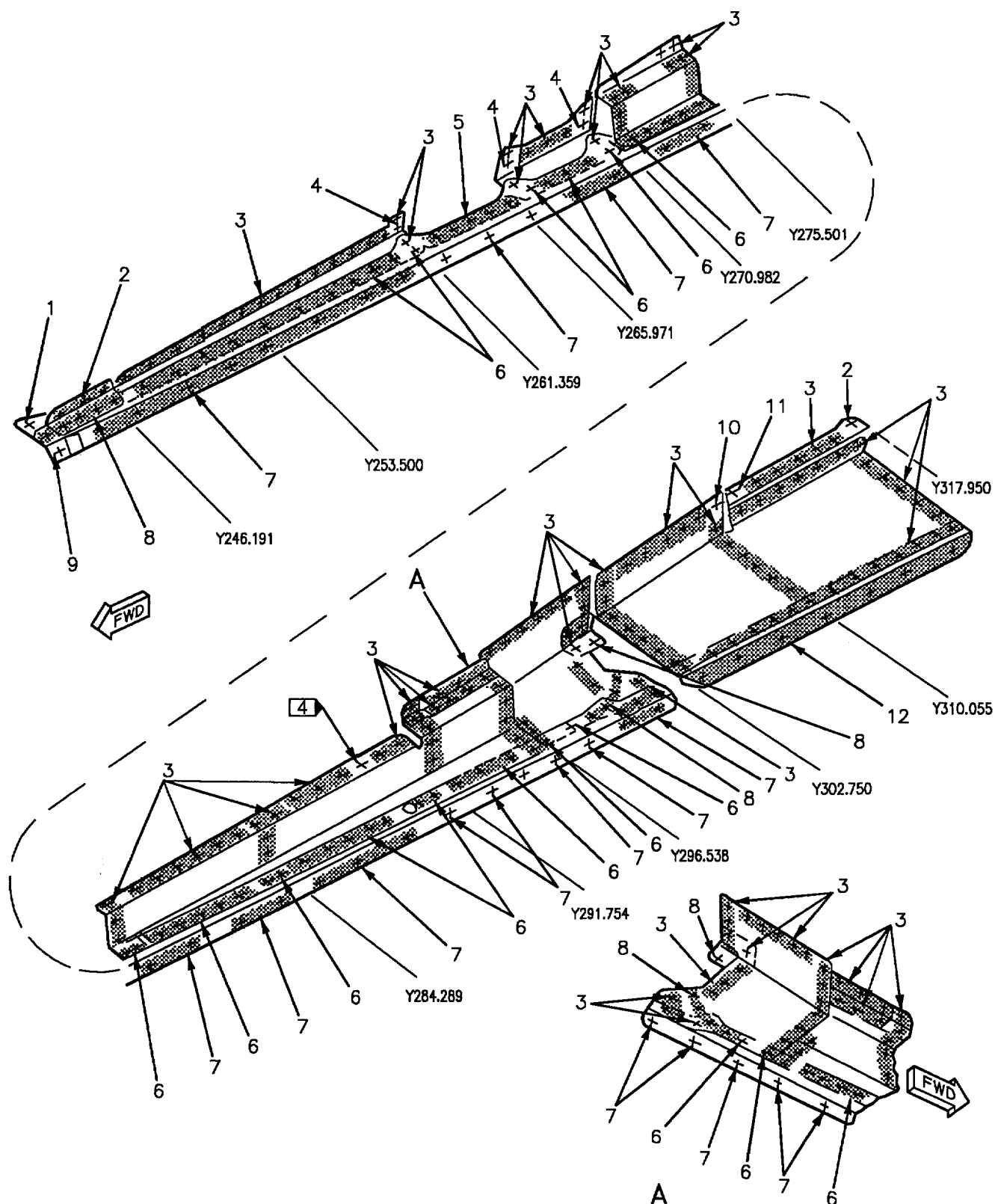


Figure 8. Lower Fairing Support, 74A350772, Fastener Index (Sheet 1)

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








INDEX NO.	HOLE NO.	QTY	HOLE SIZE		FASTENER 	WASHER	SPACER BUSHING	RETAINER
1		2	0.160 + 0.0025 -0.0000		HLT311TA5-12	SW2000-5W		SW2000-5A
2		8	0.191 +0.006 -0.000		HLT310TA6-6			SW1000-6M
3		226	0.161 +0.005 -0.000		MS20470AD5			
4		6	0.1635 +0.0022 -0.0000		HLT312TA5-3			SW1000-5M
5		10	0.160 +0.004 -0.000		NAS1399C5A4			
6		98	0.161 +0.005 -0.000		MS20426AD5			
7		56	0.196 +0.006 -0.000		HT4041-3-2-5 	NAS620C10		NAS1291C3M
8		12	0.160 +0.004 -0.000		NAS1399C5A3			
9		2	0.196 +0.006 -0.000		HT4041-3-3-5 	NAS620C10L		NAS1291C3M
10		2	0.1635 +0.0022 -0.0000		HLT312TA5-5			SW1000-5M
11		2	0.191 +0.006 -0.000		HLT310TA6-5			SW1000-6M
12		14	0.196 +0.006 -0.000		HT4041-3-3-5 			F49249E3-2 
<p style="text-align: center;">LEGEND</p> <p> For oversize repair fasteners, see (A1-F18AC-SRM-200, WP004 07).</p> <p> Torque fastener to 15-25 inch lbs.</p> <p> Attach plate nuts to structure with 1415-0306 rivets.</p> <p> Hole diameter is 0.191 +0.006 -0.000.</p>								

Figure 8. Lowering Fairing Support, 74A350772, Fastener Index (Sheet 2)

9. UPPER FAIRING SUPPORT, 74A350720, INSPECTION AND REPLACEMENT. See figure 9.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, Canopy	RE174350004-1
Repair Kit, Canopy	RE274350004- 1

Materials Required

Nomenclature	Specification or Part Number
Adhesive	RTV-106
Cheesecloth	CCC-C-440, Type 1, Class 1
Methyl Ethyl Ketone	TT-M-261
Sealing Compound	MIL-S-83430, Class A-1/2

10. INSPECTION.

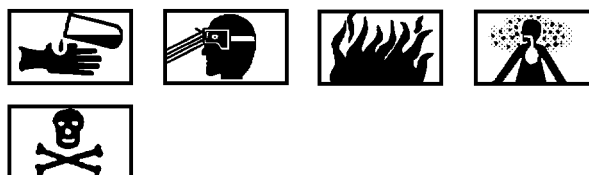


To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

- Make sure canopy is loaded correctly and secure (WP005 01).
- Remove 74A350721 fairing.
- Position locator assembly (detail 240, 241) on fixture base (detail 143, 144) by inserting L-pin (detail 198) four places, and secure by installing handknob (detail 199) six places.
- Inspect for 0.188 inch gap between upper fairing supports and locator block (detail 333, 334, 331, 332, 329, 330, 327, 328, 325, 326, 323, 324, 321, 322, 319, 320, 317, 318, 315, 316, 313, and 314), detail A.

11. REPLACEMENT.

- Remove transparency (WP005 03).
- Remove fasteners attaching upper fairing support to mating structure. See figure 10 for fastener location.
- Remove damaged upper fairing supports.



Methyl Ethyl Ketone

5

- Clean all residual sealing compound from mating structure with a plastic scraper and cheesecloth moistened with methyl ethyl ketone.

- Locate new upper fairing support.

(1) Rotate into position transparency limit locators (detail 243, 176, 229, 246, 230, 410, 231, 411, 232, 412, 233, 247, 370, 401, 374, 400, 222, 398, 224, 399, 225, and 226).

(2) Secure with L-pin (detail 155, 156), typical twenty-two places, detail A.

(3) Position inboard flange of upper fairing support net with 74A350714 side frame.

(4) Install 0.188 inch shim between outboard flange of upper fairing support and locator block (detail 333, 334, 331, 332, 329, 330, 327, 328, 325, 326, 323, 324, 321, 322, 319, 320, 317, 318, 315, 316, 313, and 314), typical twenty-two places, detail B.

NOTE

Lower surface of transparency limit locators is EOP of transparency. Make sure 0.125 inch clearance fit is maintained between lower surface of transparency limit locators and horizontal surface of upper fairing support.

(5) Slide upper fairing support up until inboard flange rests net with 74A350714 side frame and 0.188 inch shim contact locator blocks, detail A.

(6) Clamp upper fairing supports in position, detail B.

(7) Mate drill holes in upper support fitting using existing holes in mating structure as guide. See figure 10 for fastener location and hole diameter.

(8) Countersink holes to flushness requirements of fastener. See figure 10 for location.

(9) Install 74A350721 fairing with enough fasteners in 74A350772 lower fairing support to hold in correct position.

(10) Mate drill from 74A350721 fairing to upper fairing support. See figure 10 for fastener location and hole diameter.

(11) Remove 74A350721 fairing.

(12) Install plate nuts, see figure 10 and (A1-F18AC-SRM-200, WP004 05).



Sealing Compound

7

f. Fay surface seal between upper fairing support and mating structure (A1-F18AC-SRM-200, WP011 00).

g. Wet install fasteners, see figure 10 and (A1-F18AC-SRM-200, WP011 00).

h. Apply finish system (A1-F18AC-SRM-500, WP021 00).



Adhesive

12

i. Bond 74A350004 silicone rubber strip to upper fairing support using adhesive.

j. Install transparency (WP005 03).

k. Install 74A350721 fairing.

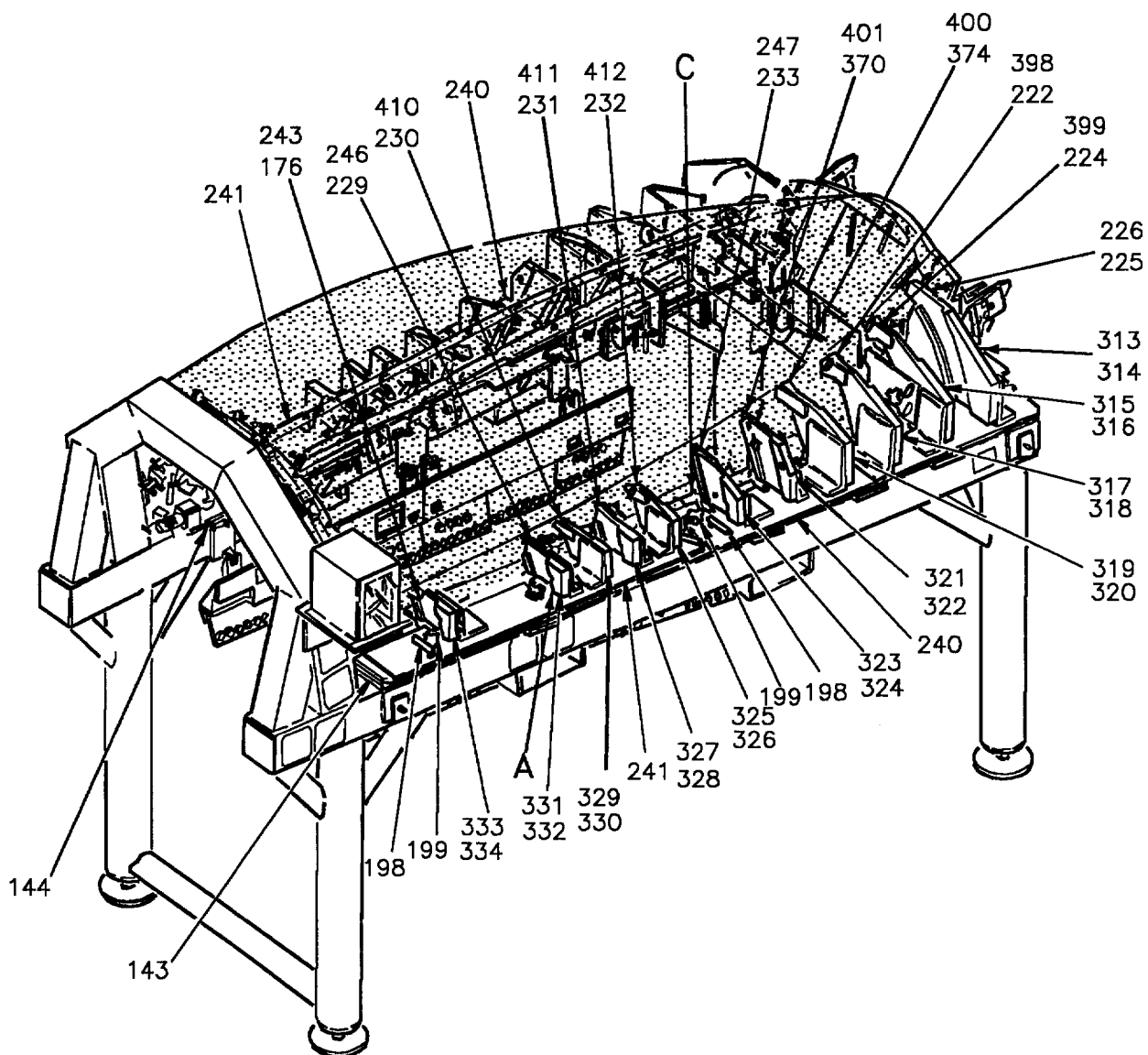


Figure 9. Inspection or Replacement - Upper Fairing Support (Sheet 1)

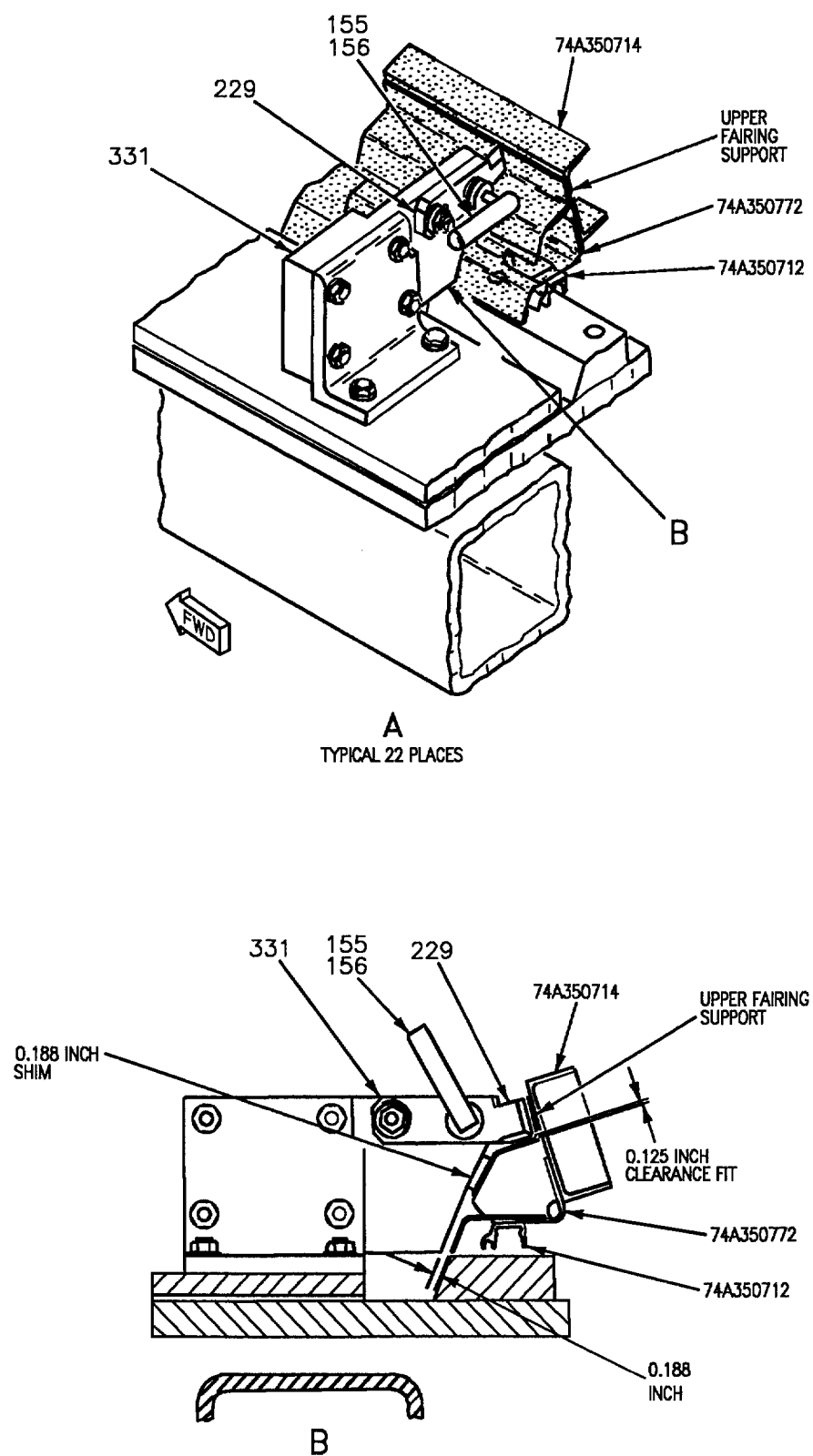


Figure 9. Inspection or Replacement - Upper Fairing Support (Sheet 2)

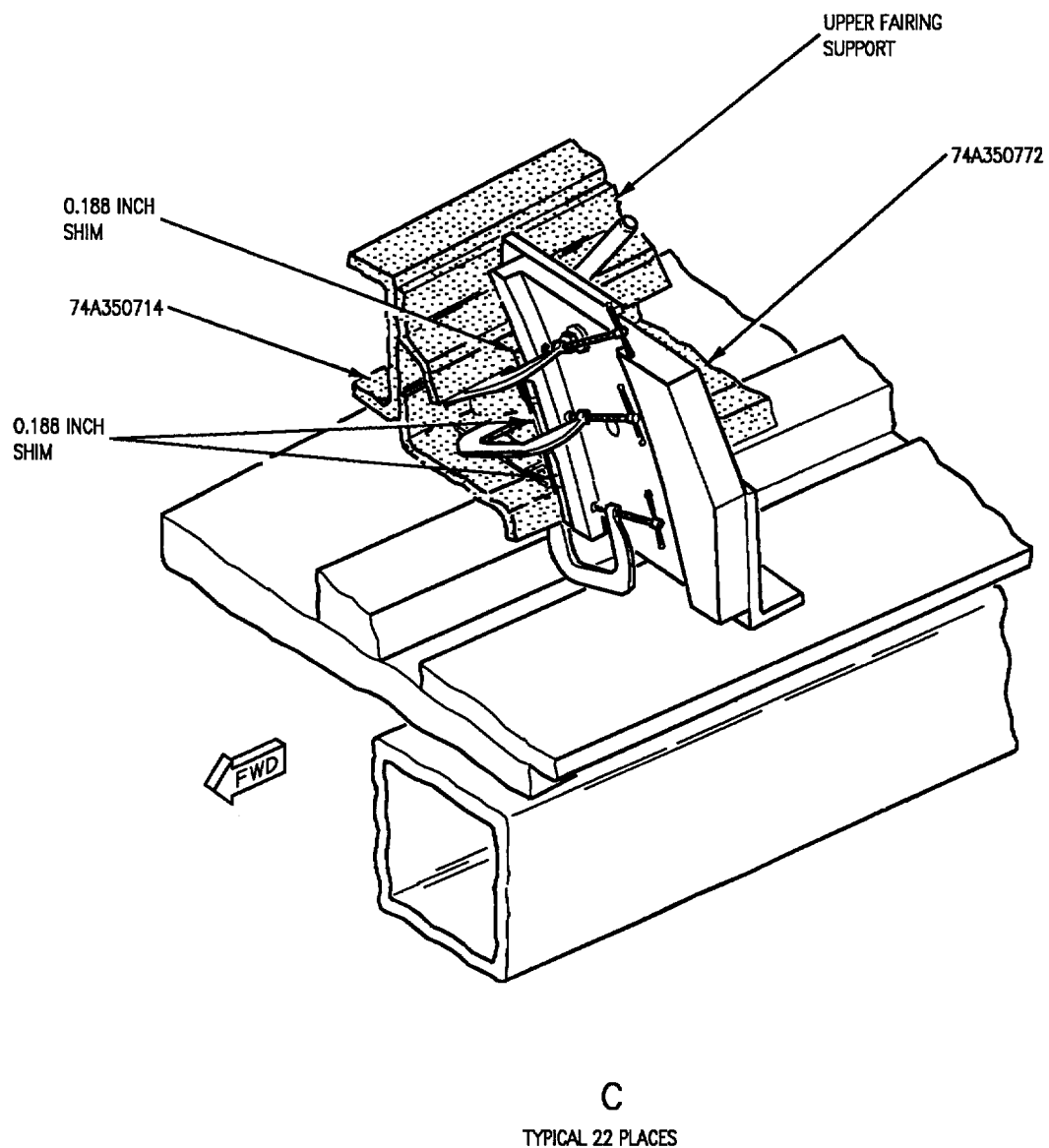


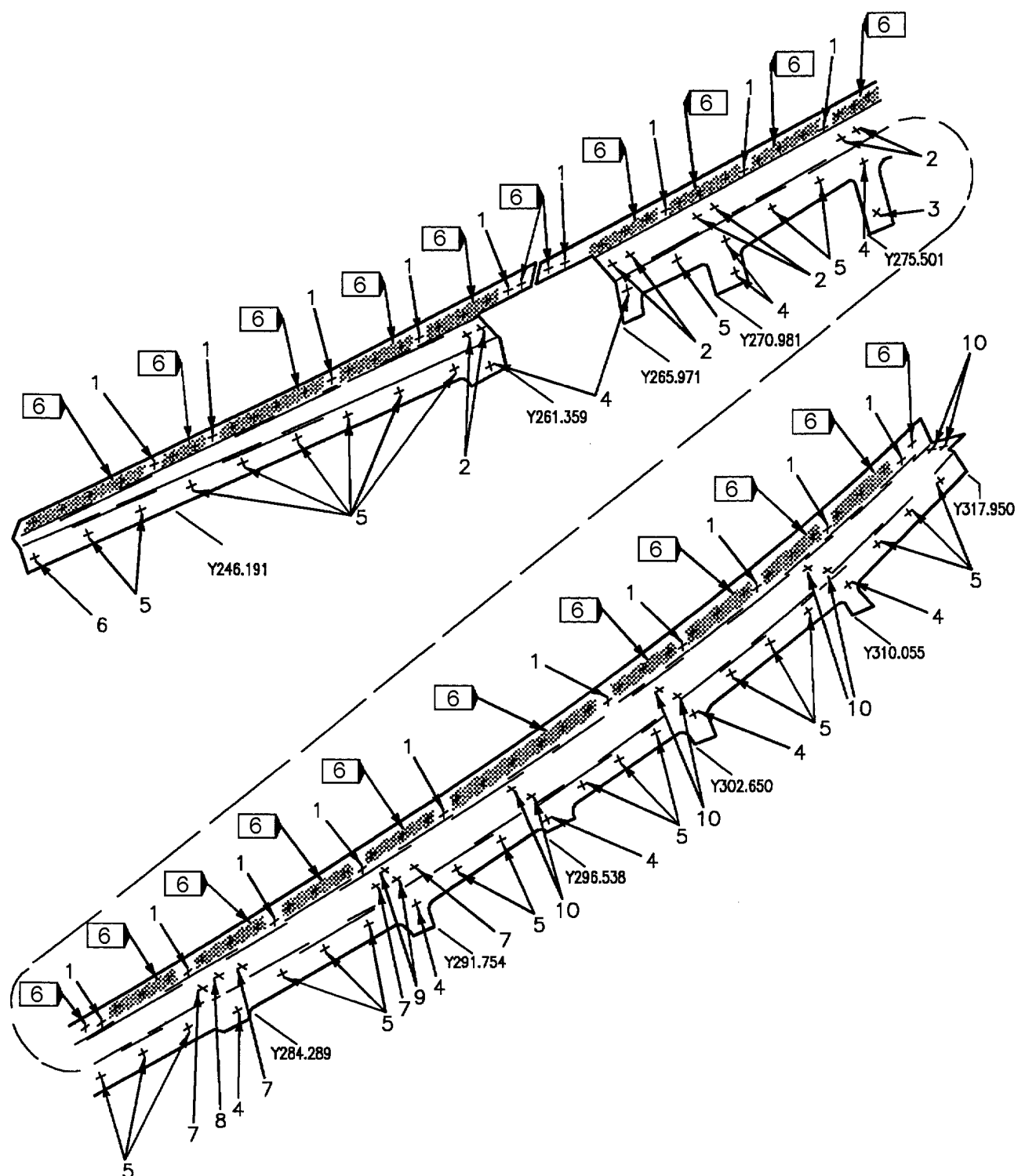
Figure 9. Inspection or Replacement - Upper Fairing Support (Sheet 3)

DETAIL NO.	NAME	FUNCTION
143, 144	Base	Base of fixture to which most locators mount.
155, 156	L-pin	Locates transparency limit locators.
176	Locator	Provides transparency limit location at Y246.191, left side.
198	L-pin	Locates locator assemblies (detail 240, 241).
199	Handknob	Secures locator assemblies (detail 240, 241).
222	Locator	Provides transparency limit location at Y302.650, left side.
224	Locator	Provides transparency limit location at Y310.055, left side.
225, 226	Locator	Provides transparency limit location at Y317.950.
229	Locator	Provides transparency limit location at Y261.359, left side.
230	Locator	Provides transparency limit location at Y265.971, left side.
231	Locator	Provides transparency limit location at Y270.981, left side.
232	Locator	Provides transparency limit location at Y275.501, left side.
233	Locator	Provides transparency limit location at Y284.289, left side.
240, 241	Locator assembly	Contains various locators for positioning and clamping upper fairing support.
243	Locator	Provides transparency limit location at Y246.191, right side.
246	Locator	Provides transparency limit location at Y261.359, right side.
247	Locator	Provides transparency limit location at Y284.289, right side.
313, 314	Locator block	Provides mold line reference and clamping ability at Y317.950.
315, 316	Locator block	Provides mold line reference and clamping ability at Y310.055.
317, 318	Locator block	Provides mold line reference and clamping ability at Y302.650.
319, 320	Locator block	Provides mold line reference and clamping ability at Y296.538.
321, 322	Locator block	Provides mold line reference and clamping ability at Y291.754.

Figure 9. Inspection or Replacement - Upper Fairing Support (Sheet 4)

DETAIL NO.	NAME	FUNCTION
323, 324	Locator block	Provides mold line reference and clamping ability at Y284.289.
325, 326	Locator block	Provides mold line reference and clamping ability at Y275.501.
327, 328	Locator block	Provides mold line reference and clamping ability at Y270.981.
329, 330	Locator block	Provides mold line reference and clamping ability at Y265.971.
331, 332	Locator block	Provides mold line reference and clamping ability at Y261.359.
333, 334	Locator block	Provides mold line reference and clamping ability at Y246.191.
370	Locator	Provides transparency limit location at Y291.754, left side.
374	Locator	Provides transparency limit location at Y296.538, left side.
398	Locator	Provides transparency limit location at Y302.650, right side.
399	Locator	Provides transparency limit location at Y310.055, right side.
400	Locator	Provides transparency limit location at Y296.538, right side.
401	Locator	Provides transparency limit location at Y291.754, right side.
410	Locator	Provides transparency limit location at Y265.971, right side.
411	Locator	Provides transparency limit location at Y270.981, right side.
412	Locator	Provides transparency limit location at Y275.501, right side.

Figure 9. Inspection or Replacement - Upper Fairing Support (Sheet 5)



05021001

Figure 10. Upper Fairing Support, 74A350720, Fastener Index (Sheet 1)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE		FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1		38	0.098 +0.005 -0.000		MS20426AD3 5			
2		16	0.159 +0.006 -0.000		NAS1399D5A2 5			
3		1	0.196 +0.006 -0.000		HT4041-3-3-5 2			F49249E3-1 3
4		20	0.196 +0.006 -0.000		HT4041-3-3-5 2			F49251E3-1 3
5		56	0.196 +0.006 -0.000		HT4041-3-3-5 2			F49249E3-2 3
6		2	0.196 +0.006 -0.000		HT4041-3-3-5 2			F50403-3-1 3
7		8	0.196 +0.006 -0.000		NAS673V2 4	AN960C10L		NAS1291C3M
8		2	0.166 +0.006 -0.000		HLT310TA5-2			SW1000-5M
9		4	0.159 +0.006 -0.000		NAS1398D5A2			
10		16	0.165 +0.003 -0.000		NAS1673-08L4			
<p style="text-align: center;">LEGEND</p> <p>1 For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07).</p> <p>2 Torque 15-25 in. lbs.</p> <p>3 Attach platenuts to structure with 1415-0306 rivets.</p> <p>4 Install bolt head down.</p> <p>5 Countersink holes to flushness requirements of fastener.</p> <p>6 Hole diameter is 0.195 +0.007 -0.000.</p>								

Figure 10. Upper Fairing Support, 74A350720, Fastener Index (Sheet 2)

12. INTERCOSTAL, 74A350769, INSPECTION AND REPLACEMENT. See figure 11.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, Canopy	RE174350004-1
Repair Kit, Canopy	RE27435004-1

Materials Required

Nomenclature	Specification or Part Number
Cheesecloth	CCC-C-440, Type 1, Class 1
Methyl Ethyl Ketone	TT-M-261
Sealing Compound	MIL-S-83430, Class A-1/2

13. INSPECTION.



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

- Make sure canopy is loaded correctly and secure (WP005 01).
- Remove 74A350721 fairing.
- Position locator assembly (detail 240, 241) on fixture base (detail 143, 144) by inserting L-pin (detail 198) four places and secure by installing handknob (detail 199) six places.
- Inspect for 0.188 inch gap between outboard flange of intercostal and locator block (detail 333, 334, 331, 332, 329, 330, 327, 328, 325, 326, 323, 324, 321, 322, 319, 320, 317, 318, 315, 316, 313, and 314).
- Position locator (detail 278, 279) on locator block (detail 315, 316) by inserting L-pin (detail 156) and secure by installing handknob (detail 209), detail A.

f. Inspect for 0.125 inch gap between inboard flange of intercostal and locator (detail 278, 279), detail A.

14. REPLACEMENT.

- Remove fasteners attaching damaged intercostal to mating structure. See figure 12 for fastener location.
- Remove damaged intercostal.



Methyl Ethyl Ketone

5

c. Clean all residual sealing compound from mating structure with a plastic scraper and cheesecloth moistened with methyl ethyl ketone.

d. Locate new intercostal:

(1) Retract L-pins (detail 155 and 156) and rotate locator pin (detail 219) until roll pin (detail 227) points forward and aft, detail C.

(2) Raise locator pin (detail 219) until head contacts inner surface of 74A350712 seal retainer, detail B.

(3) Secure locator pin (detail 219) into position using L-pins (detail 155 and 156), detail C.

(4) Raise locator (detail 358, 365, and 366) and secure with L-pin (detail 156) at location stamped "PIN FOR NET," typical six places, detail D.

(5) Make sure inboard flange of intercostal is net to inboard flange of 74A350772 lower fairing supports and outboard surface of 74A350714 side frame.

(6) Make sure 74A350772 lower fairing supports are net to locators (detail 358, 365, and 366).

(7) Position bottom flange of intercostal net to 74A350772 lower fairing supports.

(8) Insert 0.188 inch shim between outboard flange of intercostal and locator block (detail 333, 334, 331, 332, 329, 330, 327, 328, 325, 326, 323, 324, 321, 322, 319, 320, 317, 318, 315, 316, 313, and 314), detail E.

(9) Clamp outboard flange of intercostal and shim to locator blocks, detail E.

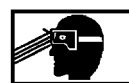
(10) Mate drill holes in intercostal using existing holes in mating structure as guide. See figure 12 for fastener location and hole diameter.

(11) Install 74A350721 fairing with enough fasteners in 74A350772 lower fairing support and 74A350720 upper fairing support to hold in correct position.

(12) Mate drill from 74A350721 fairing to intercostal.

(13) Remove 74A350721 fairing.

(14) Install plate nuts on intercoastals, see figure 12 and (A1-F18AC-SRM-200, WP004 05).



Sealing Compound

7

e. Fay surface seal between intercostal and mating structure (A1-F18AC-SRM-200, WP011 00).

f. Wet install fasteners, see figure 12 and (A1-F18AC-SRM-200, WP011 00).

g. Apply finish system (A1-F18AC-SRM-500, WP021 00).

h. Install 74A350721 fairing.

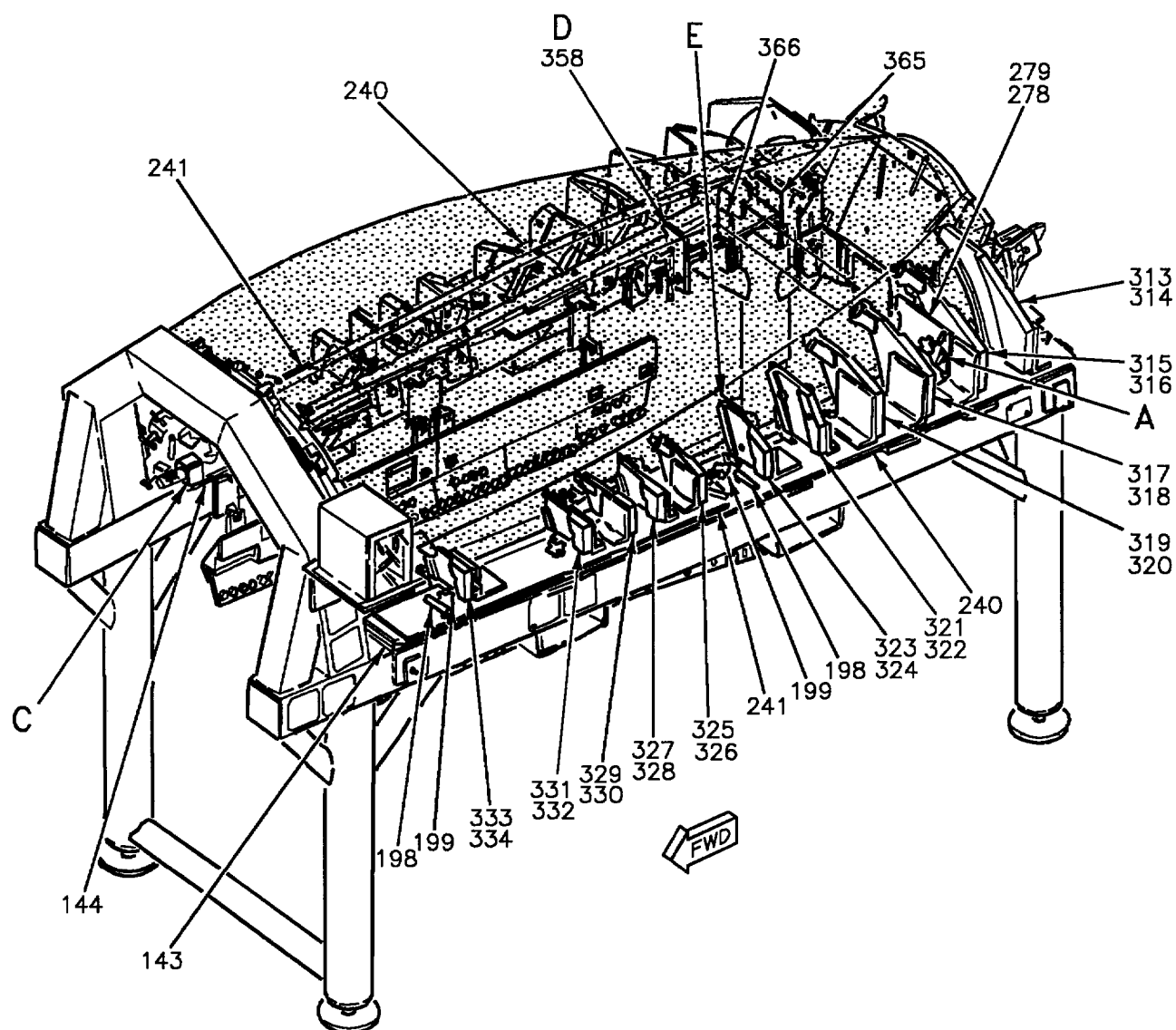


Figure 11. Inspection or Replacement - Intercostal (Sheet 1)

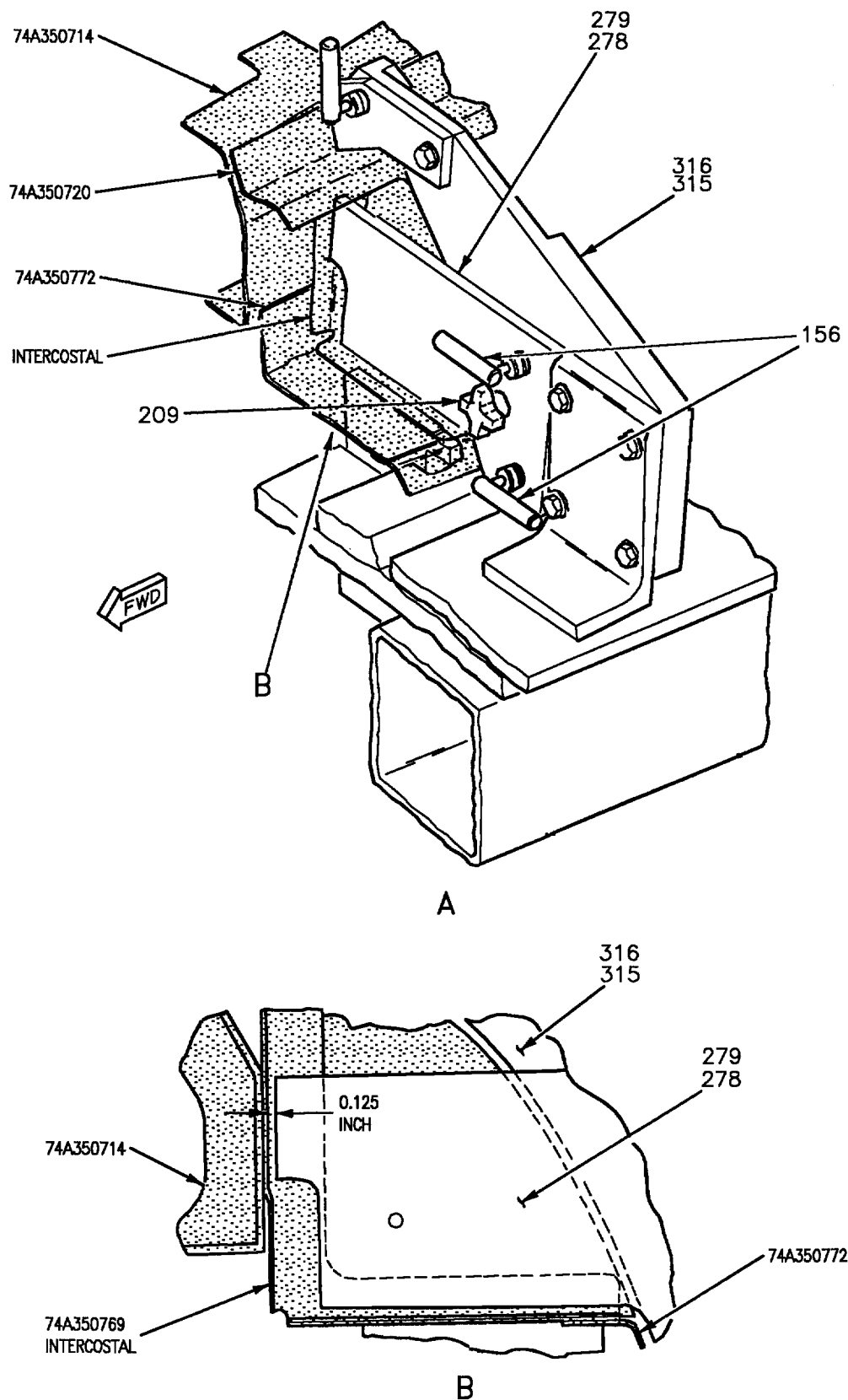


Figure 11. Inspection or Replacement - Intercostal (Sheet 2)

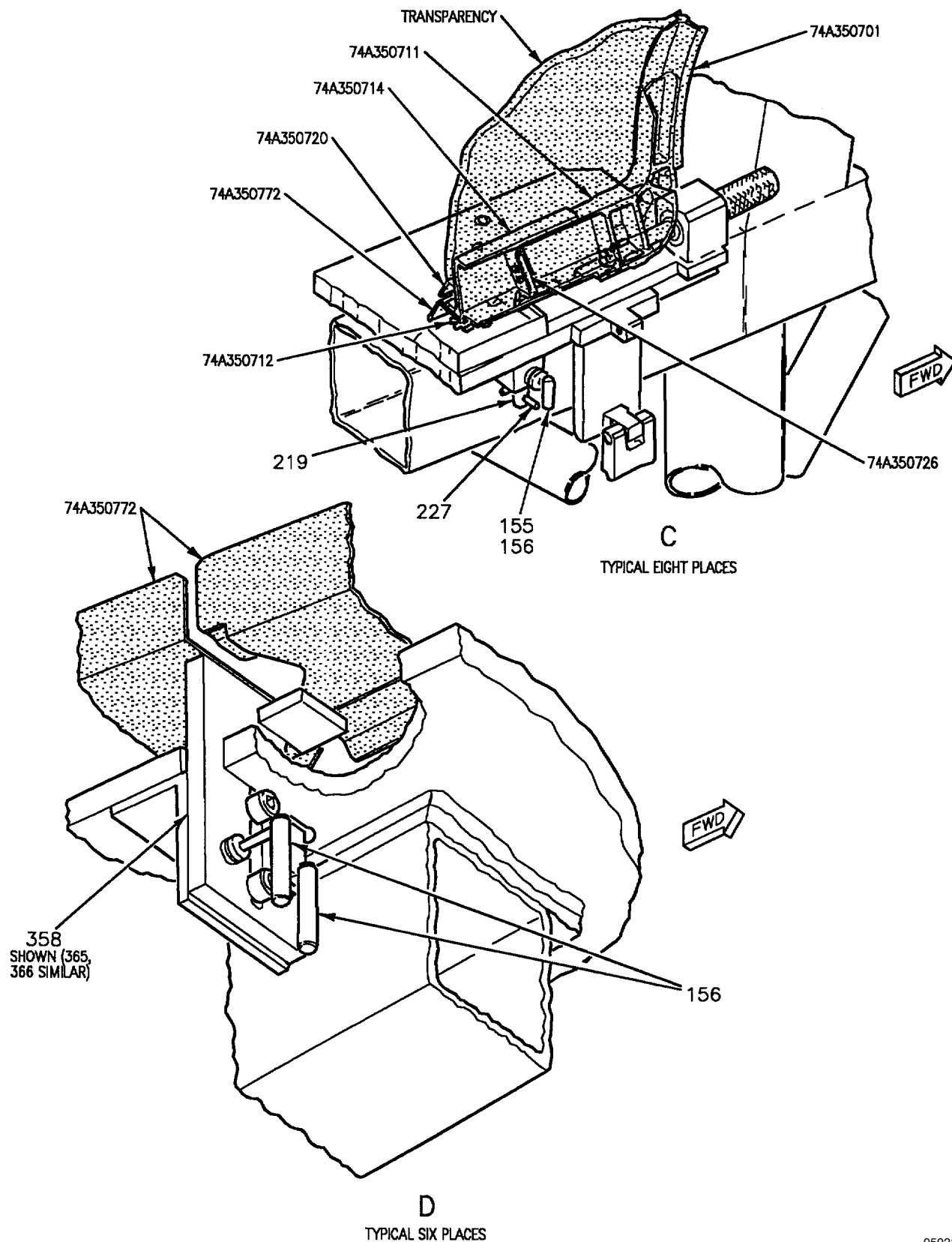
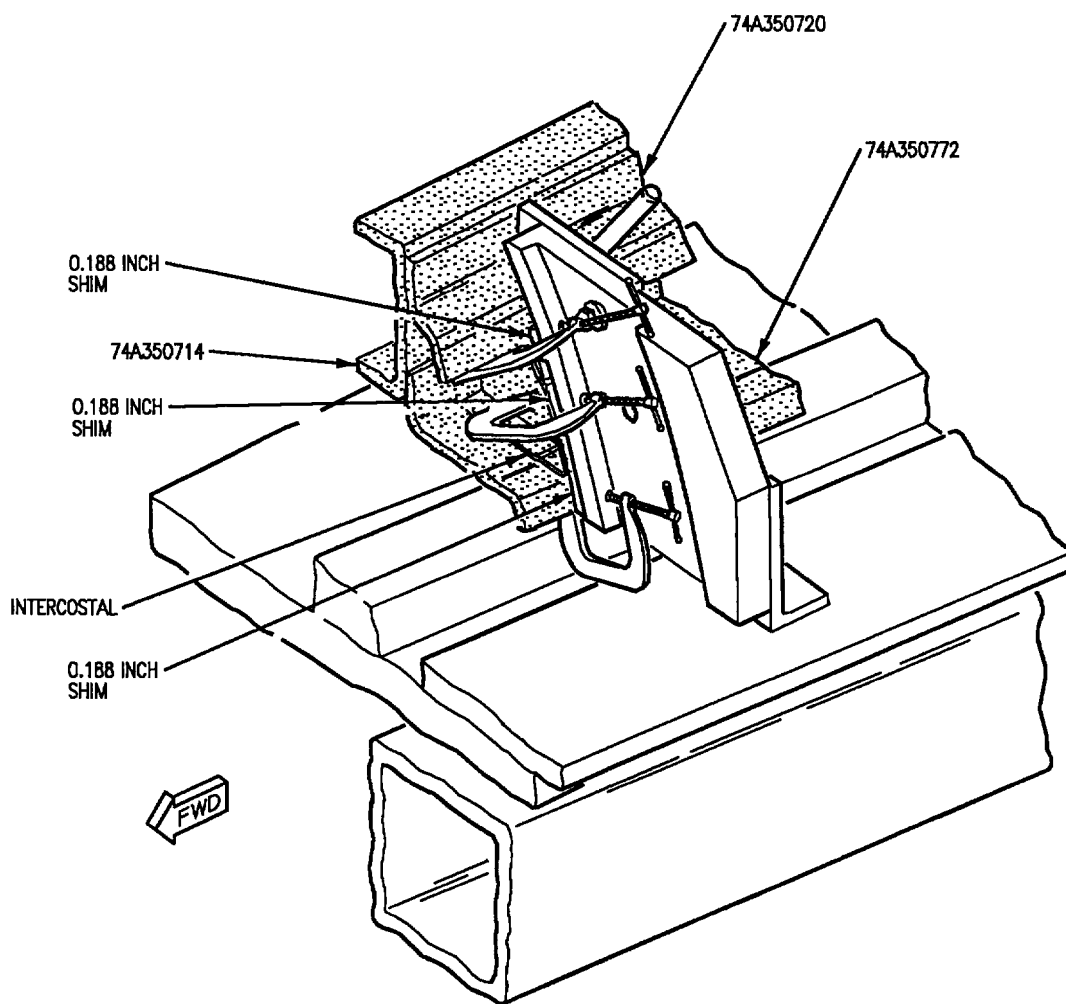


Figure 11. Inspection or Replacement - Intercostal (Sheet 3)



E

TYPICAL 22 PLACES

Figure 11. Inspection or Replacement - Intercostal (Sheet 4)

DETAIL NO.	NAME	FUNCTION
143, 144	Base	Base of fixture to which most locators mount.
155	L-pin	Locates locator pin (detail 219).
156	L-pin	Locates locator (detail 219, 358, 365, and 366).
198	L-pin	Locates locator assembly (detail 240, 241).
199	Handknob	Secures locator assembly (detail 240, 241).
209	Handknob	Secures locator (detail 278, 279).
219	Locator pin	Locates canopy in correct Z plane location.
227	Roll pin	Used as a handle and directional indicator for locator pin (detail 219).
240, 241	Locator assembly	Contains various locators for positioning and clamping intercostal.
278, 279	Locator	Provides X plane location at Y310.055.
313, 314	Locator block	Provides mold line reference and clamping ability at Y317.950.
315, 316	Locator block	Provides mold line reference and clamping ability at Y310.055.
317, 318	Locator block	Provides mold line reference and clamping ability at Y302.650.
319, 320	Locator block	Provides mold line reference and clamping ability at Y296.538.
321, 322	Locator block	Provides mold line reference and clamping ability at Y291.754.
323, 324	Locator block	Provides mold line reference and clamping ability at Y284.289.
325, 326	Locator block	Provides mold line reference and clamping ability at Y275.501.
327, 328	Locator block	Provides mold line reference and clamping ability at Y270.981.
329, 330	Locator block	Provides mold line reference and clamping ability at Y265.971.
331, 332	Locator block	Provides mold line reference and clamping ability at Y261.359.
333, 334	Locator block	Provides mold line reference and clamping ability at Y246.191.
358	Locator	Provides Z plane location at Y302.650.
365	Locator	Provides Z plane location at Y317.950.
366	Locator	Provides Z plane location at Y310.055.

Figure 11. Inspection or Replacement - Intercostal (Sheet 5)

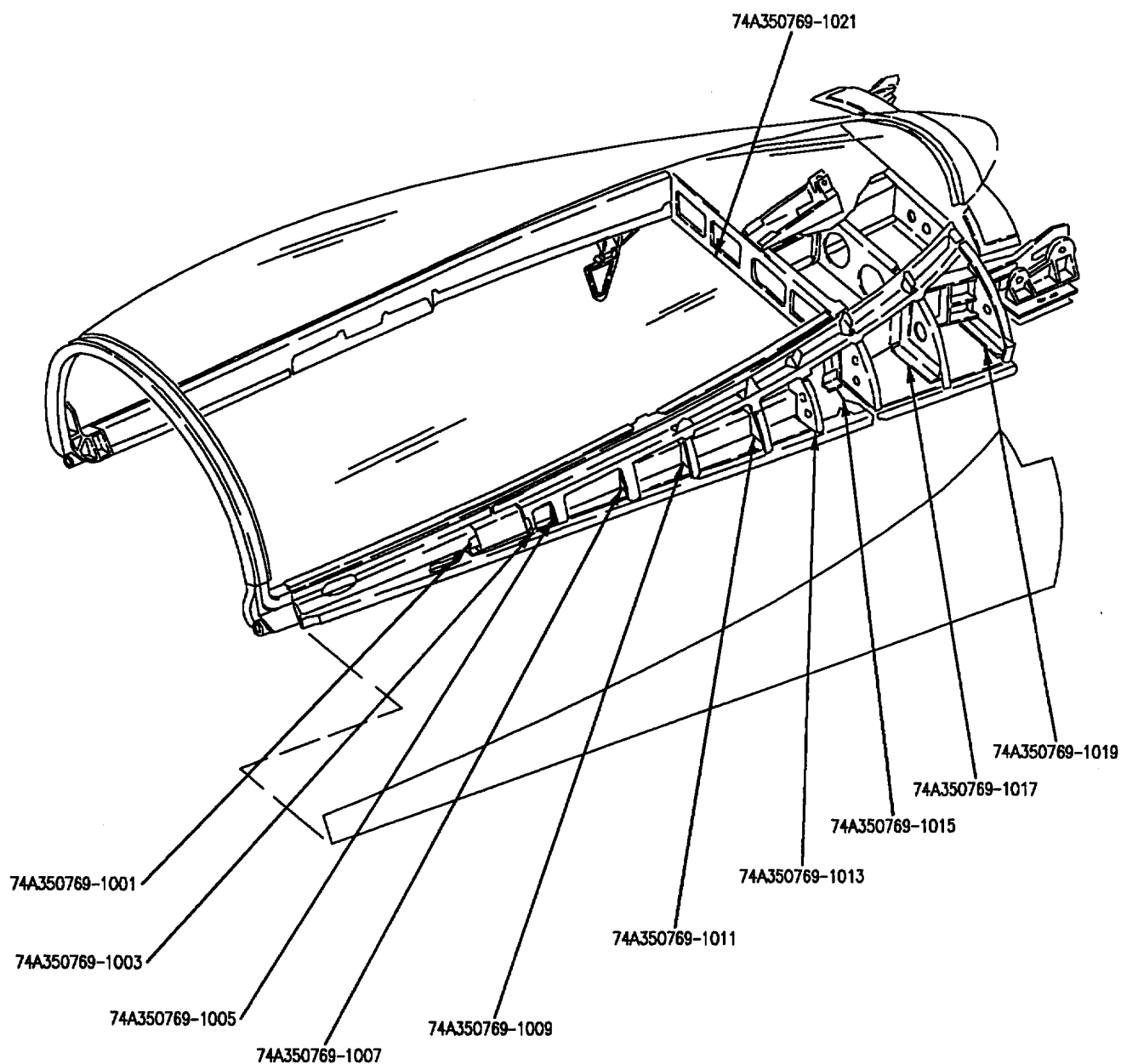


Figure 12. Intercostal, 74A350769, Fastener Index (Sheet 1)

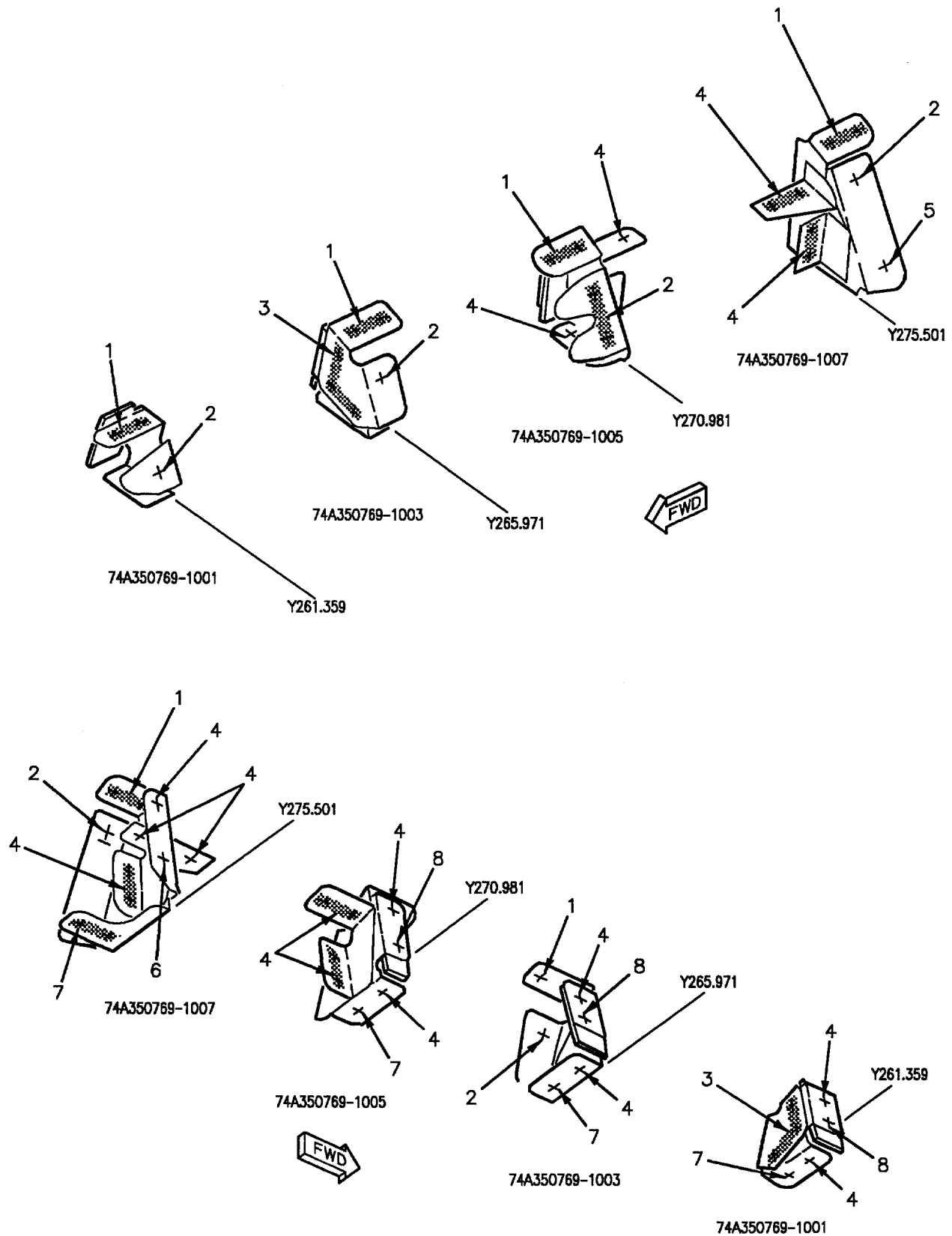
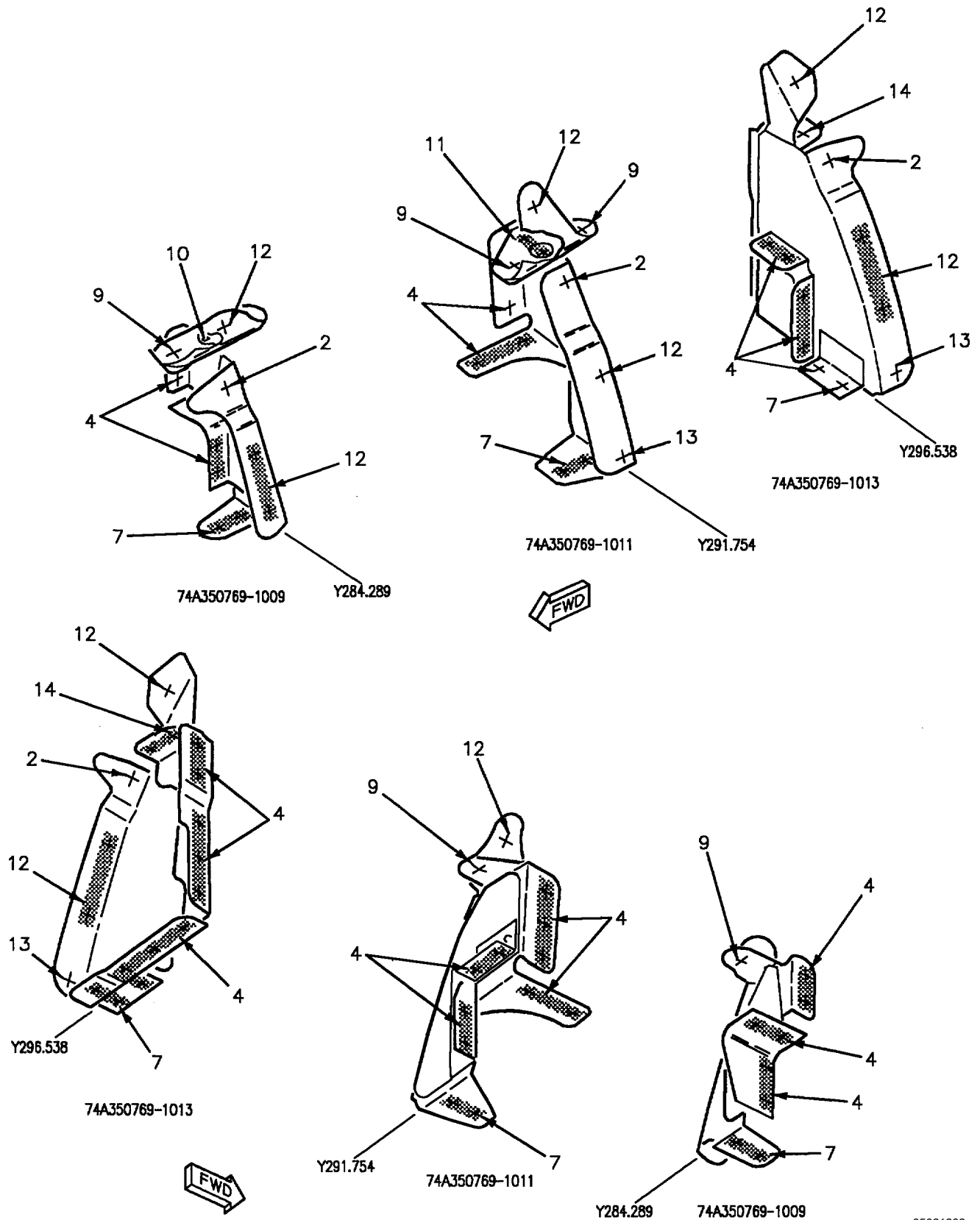


Figure 12. Intercostal, 74A350769, Fastener Index (Sheet 2)



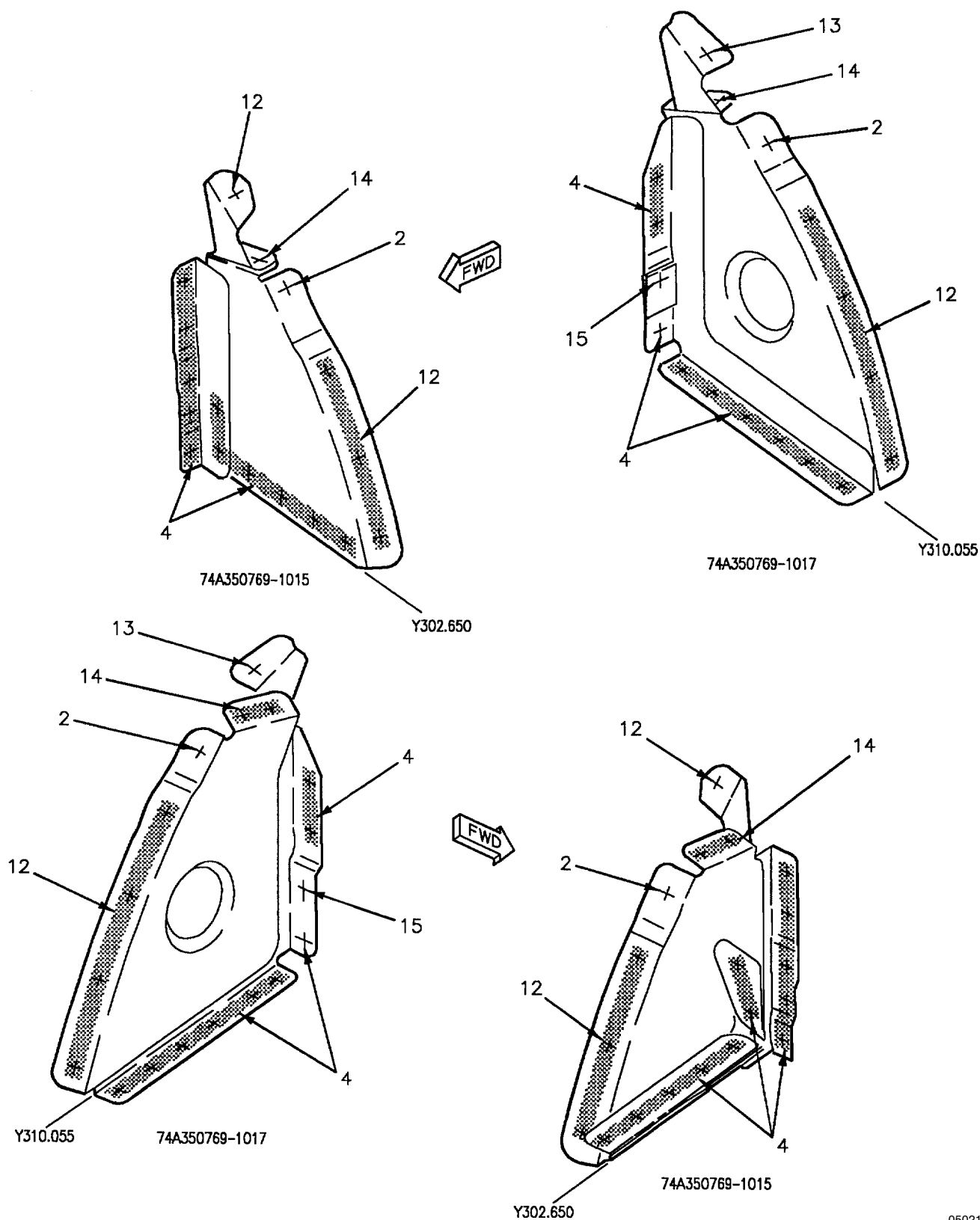


Figure 12. Intercostal, 74A350769, Fastener Index (Sheet 4)

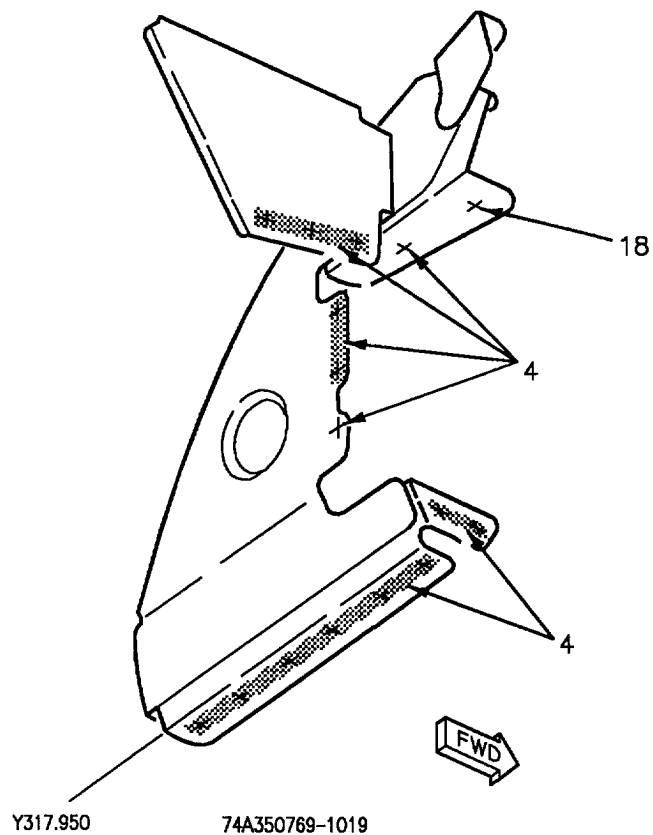
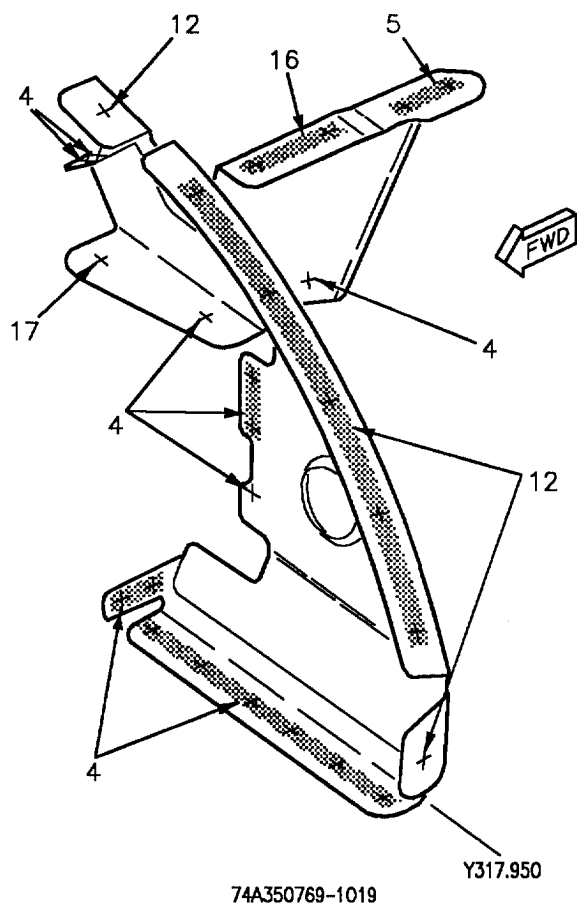


Figure 12. Intercostal, 74A350769, Fastener Index (Sheet 5)

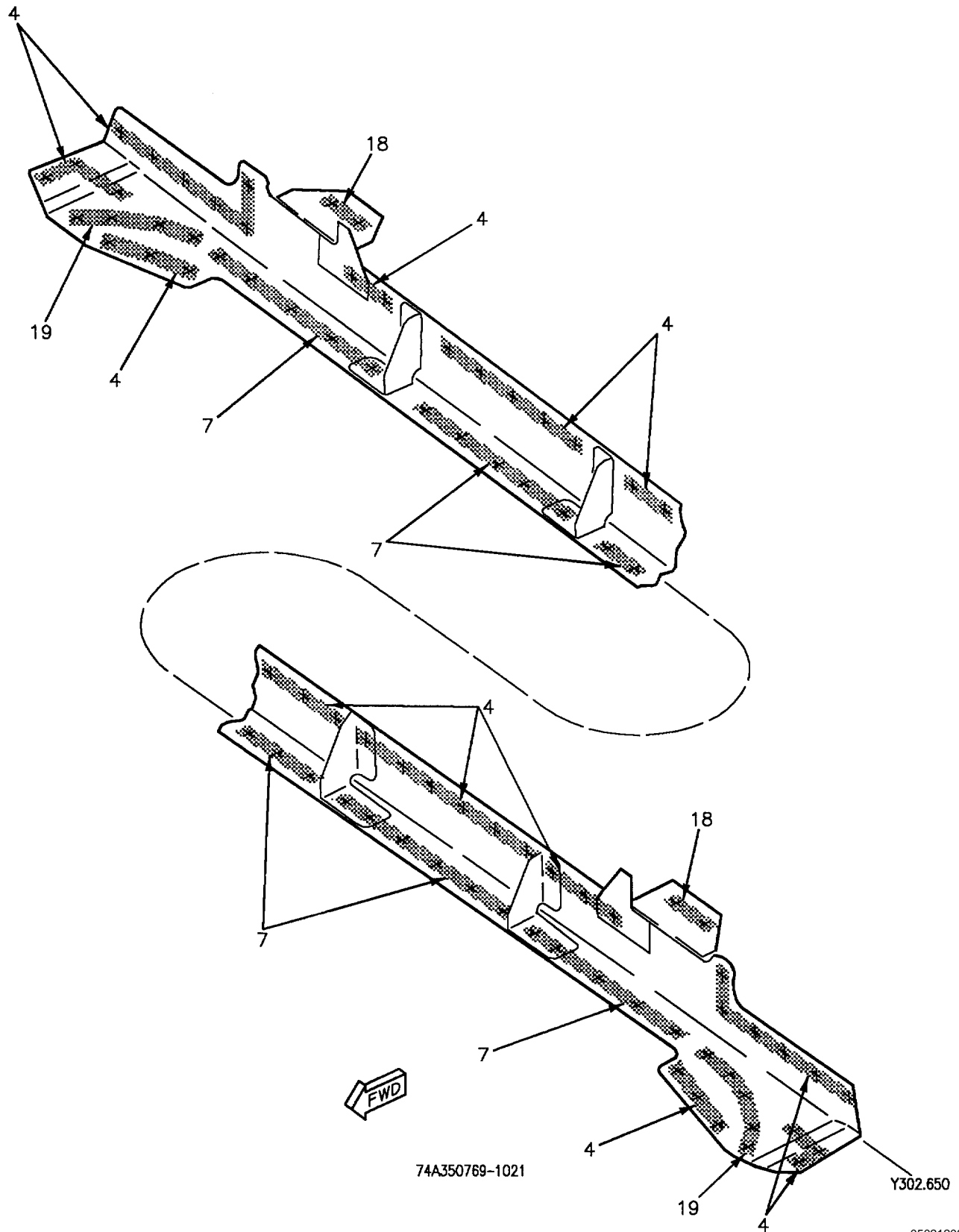


Figure 12. Intercostal, 74A350769, Fastener Index (Sheet 6)

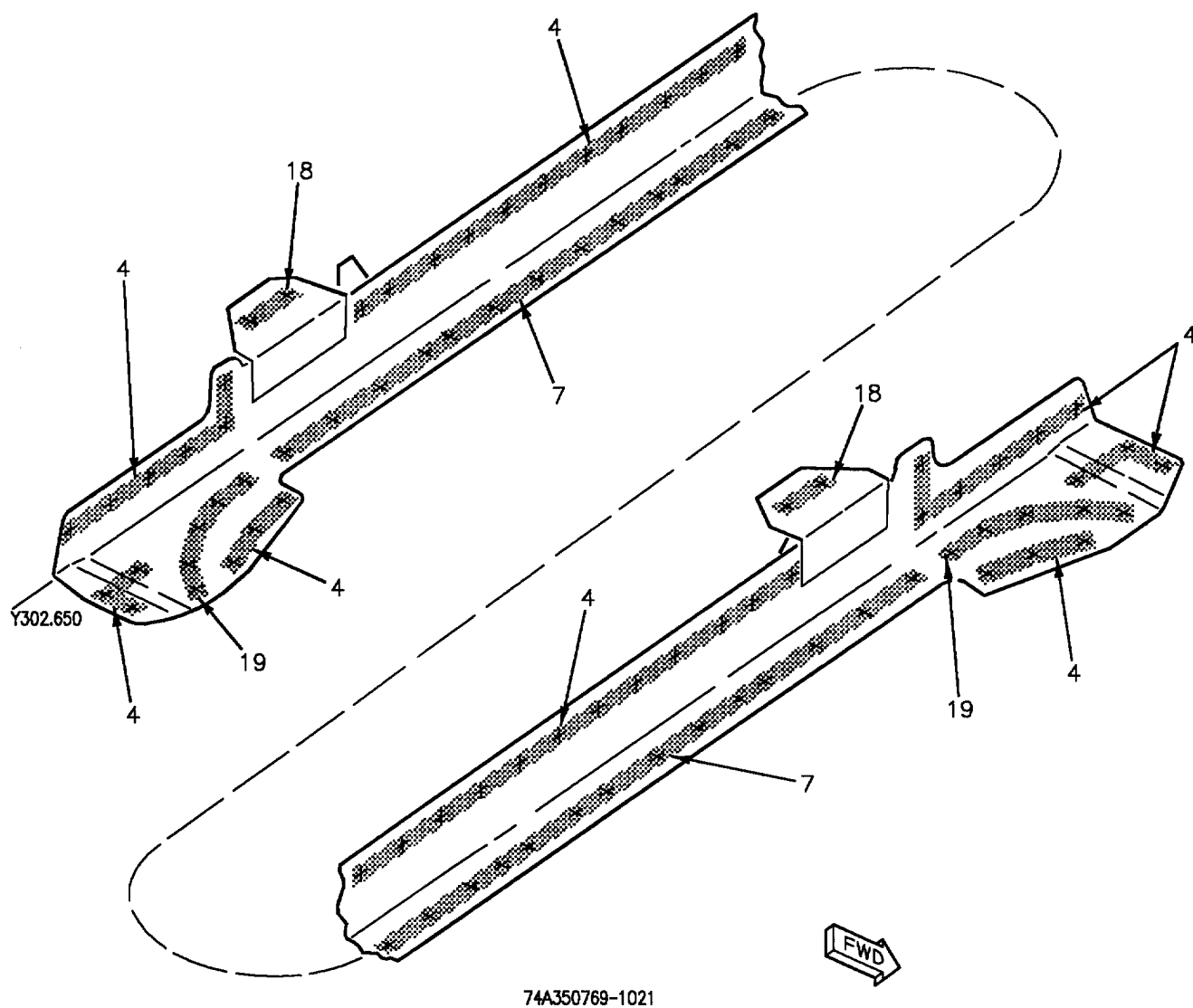


Figure 12. Intercostal, 74A350769, Fastener Index (Sheet 7)












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1		20	0.159 +0.006 -0.000		NAS1399D5A2			
2		20	0.195 +0.007 -0.000		HT4041-3-3-5 			F49251E3-1 
3		12	0.161 +0.003 -0.000		NAS1398C5-3			
4		187	0.161 +0.005 -0.000		MS20470AD5			
5		6	0.195 +0.007 -0.000		HT4041-3-3-5 			F49249E3-1 
6		2	0.1635 +0.0022 -0.0000		HLT312TA5-6			SW1000-5M
7		49	0.161 +0.005 -0.000		MS20426AD5			
8		6	0.1635 +0.0022 -0.0000		HLT312TA5-3			SW1000-5M
9		8	0.196 +0.006 -0.000		NAS673V2 	AN960C10L		NAS1291C3M
10		2	0.166 +0.006 -0.000		HLT310TA5-2			SW1000-5M
11		4	0.159 +0.006 -0.000		NAS1398D5A2			
12		6	0.195 +0.007 -0.000		HT4041-3-3-5 			F49249E3-2 
13		2	0.195 +0.007 -0.000		HT4041-3-3-5 			F49251E3-2 
14		12	0.165 +0.003 -0.000		NAS1673-08L4 			
15		2	0.1635 +0.0022 -0.0000		HLT312TA5-5			SW1000-5M
16		4	0.195 +0.007 -0.000		HT4041-3-3-5 	AN960C10L		NAS1291C3M
17		2	0.191 +0.006 -0.000		HLT310TA6-5			SW1000-6M
18		4	0.199 +0.003 -0.000		NAS1671-3L-4			
19		10	0.161 +0.005 -0.000		NAS1399C5A3			

Figure 12. Intercostal, 74A350769, Fastener Index (Sheet 8)







INDEX NO.	HOLE NO.	QTY	HOLE SIZE		FASTENER 	WASHER	SPACER BUSHING	RETAINER
<p style="text-align: center;">LEGEND</p> <p> For oversize repair fasteners, see (A1-F18AC-SRM-200, WP004 07).</p> <p> Torque to 15-25 in. lbs.</p> <p> Attach platenuts to structure with 1415-0306 rivets.</p> <p> Install bolt head down.</p> <p> Use alternate fastener NAS673V2 bolt, AN960C10L washer, and NAS1291C3M nut if necessary.</p>								

Figure 12. Intercostal, 74A350769, Fastener Index (Sheet 9)

15. **CHANNEL, 74A350726, REPLACE-
MENT.** See figure 13.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, Canopy	RE174350004-1
Repair Kit, Canopy	RE274350004-1

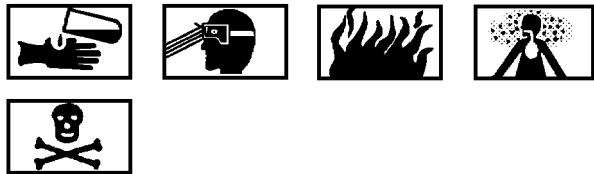
Materials Required

Nomenclature	Specification or Part Number
Cheesecloth	CCC-C-440, Type 1, Class 1
Methyl Ethyl Ketone	TT-M-261
Sealing Compound	MIL-S-83430, Class A-1/2



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

- a. Make sure canopy is loaded correctly and secure (WP005 01).
- b. Remove fasteners attaching damaged channel to mating structure. See figure 13 for fastener location.
- c. Remove damaged channel.



Methyl Ethyl Ketone

5

d. Clean all residual sealing compound from mating structure with a plastic scraper and cheesecloth moistened with methyl ethyl ketone.

e. Locate new channel brackets:

(1) If installing new channel brackets, transfer hole pattern from salvaged channel brackets or locate blind holes (A1-F18AC-SRM-200, WP004 03).



Sealing Compound

7

(2) Fay surface seal between channel brackets and 74A350711 corner frame and 74A350714 side frame (A1-F18AC-SRM-200, WP011 00).

(3) Wet install fasteners, see figure 13 and (A1-F18AC-SRM-200, WP011 00).

f. Locate new channel angles:

(1) If installing new channel angles, transfer hole pattern from salvaged channel angles or locate blind holes (A1-F18AC-SRM-200, WP004 03).

(2) Fay surface seal between channel angles (A1-F18AC-SRM-200, WP011 00).

(3) Wet install fasteners, see figure 13 and (A1-F18AC-SRM-200, WP011 00).

(4) Fay surface seal between channel angles and mating structure.

(5) Wet install fasteners, see figure 13 and (A1-F18AC-SRM-200, WP011 00).

(6) Apply finish system (A1-F18AC-SRM-500, WP021 00).

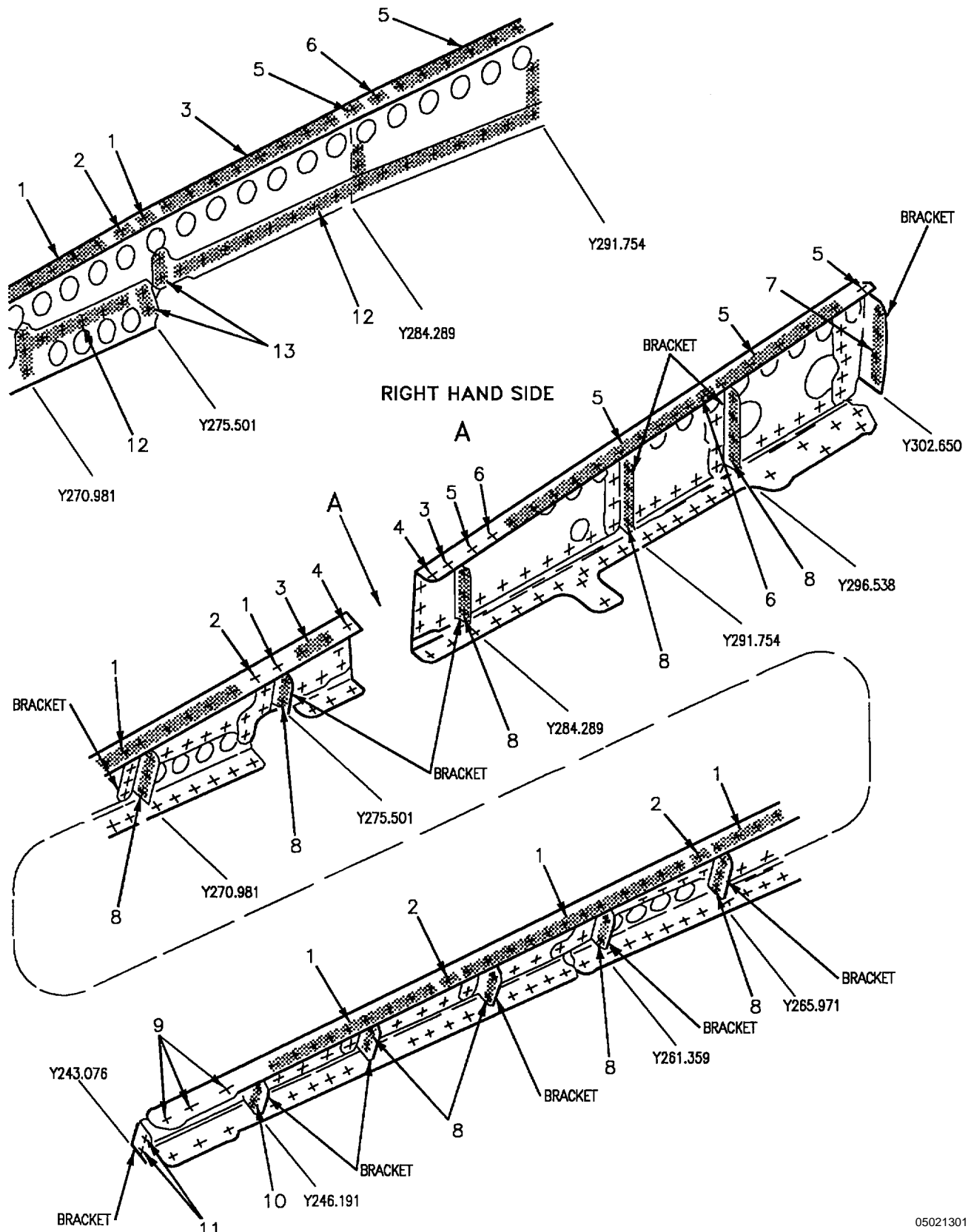


Figure 13. Channel, 74A350726, Fastener Index (Sheet 1)

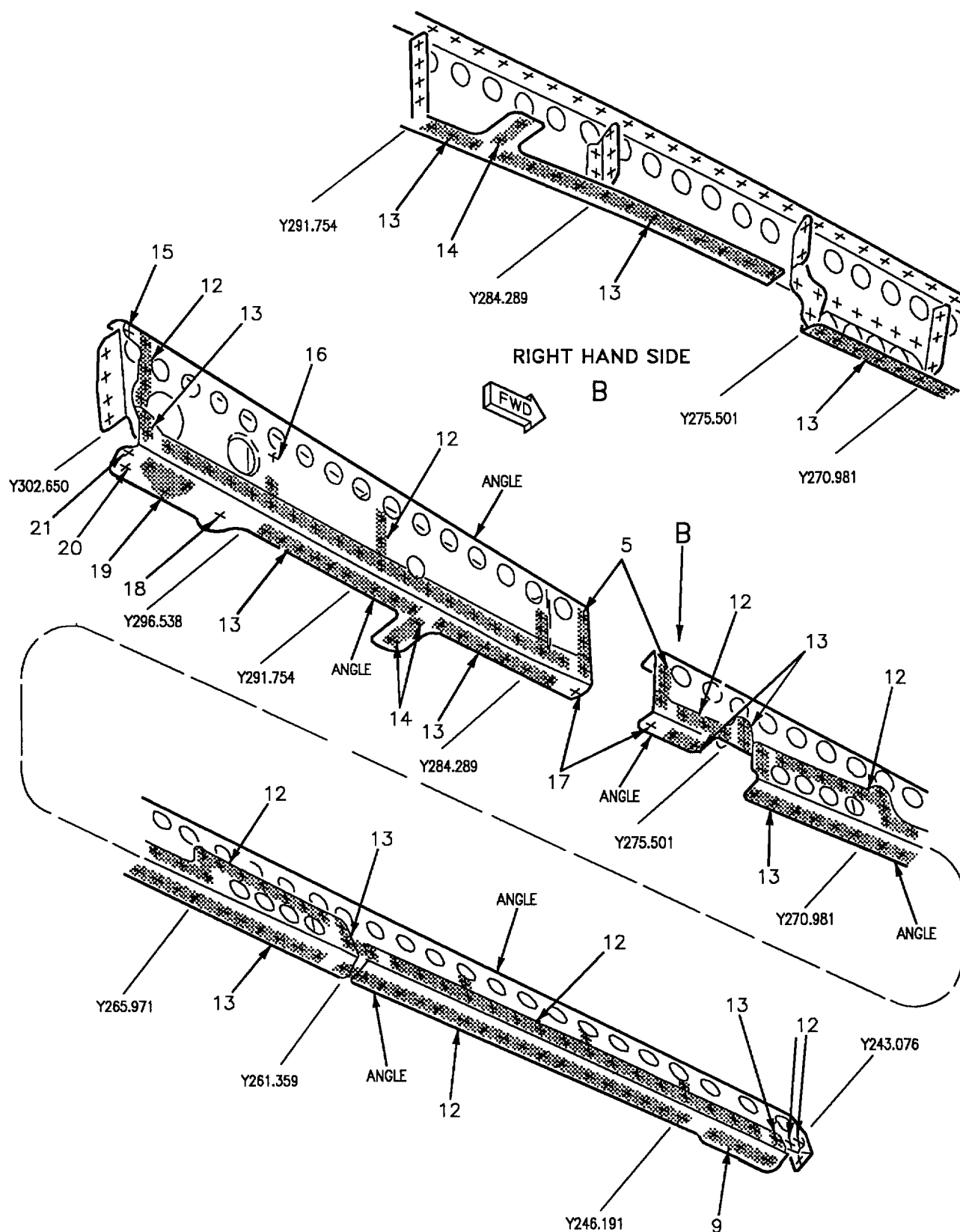


Figure 13. Channel, 74A350726, Fastener Index (Sheet 2)











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2		3	0.165 +0.003 -0.000		NAS1673-08L2 			F50405-08  
3		11	0.165 +0.003 -0.000		NAS1673-08L3			
4		2	0.165 +0.003 -0.000		NAS1673-08L4			
5		40	0.161 +0.003 -0.000		NAS1398C5-3			
6		2	0.161 +0.003 -0.0000		NAS1398C5-3 			F50405-08  
7		8	0.191 +0.006 -0.000		HLT310TA6-6			SW1000-6M
8		50	0.161 +0.005 -0.000		MS20470AD5			
9		6	0.199 +0.003 -0.000		NAS1673-3L5			
10		4	0.191 +0.006 -0.000		HLT310TA6-5			SW1000-6M
11		4	0.166 +0.006 -0.000		HLT310TA5-5			SW1000-5M
12		146	0.161 +0.003 -0.000		NASL1398D5-2			
13		94	0.161 +0.003 -0.000		NAS1398D5-3			
14		4	0.196 +0.006 -0.000		-			F49249E3-1 
15		2	0.129 +0.003 -0.000		NAS1398D4-2			
16		2	0.195 +0.007 -0.000		-			F49251E3-2 
17		2	0.191 +0.003 -0.000		NAS1398D5-5			
18	251, 253	2	0.375 +0.007 -0.000		NAS676V14	AN960C616L		NAS1291C6M

Figure 13. Channel, 74A350726, Fastener Index (Sheet 3)











INDEX NO.	HOLE NO.	QTY	HOLE SIZE		FASTENER 	WASHER	SPACER BUSHING	RETAINER
19		6	0.161 +0.003 -0.000		NAS1398D5-6			
20	252, 254	2	0.250 +0.006 -0.000		NAS674V14	AN960C416L		NAS1291C4M
21		2	0.1645 +0.003 -0.000		NAS1671-08-5			
<p style="text-align: center;">LEGEND</p> <p> For oversize repair fasteners, see (A1-F18AC-SRM-200, WP004 07).</p> <p> Left side.</p> <p> Right side.</p> <p> Attach platenut to structure with RV1241-3-3 rivets.</p> <p> Attach platenut to structure with RV1241-3-2 rivets.</p> <p> Attach platenut to structure with 1415-0310 rivets.</p> <p> Attach platenut to structure with 1415-03 rivets.</p> <p> See paragraph 17 for drilling information.</p>								

Figure 13. Channel, 74A350726, Fastener Index (Sheet 4)

16. **LATCH, 74A350705 AND/OR 74A350709, REPLACEMENT.** See figure 14.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, Canopy	RE174350004-1
Repair Kit, Canopy	RE274350004-1
Torque Wrench, 5 to 150 Inch-Pounds	-

Materials Required

Nomenclature	Specification or Part Number
Sealing Compound	MIL-S-22473, Grade D



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

- a. Make sure canopy is loaded correctly and secure (WP005 01).
- b. If drilling latch attach holes in new 74A350714 side frame is required, do the following steps:
- (1) Install clamp half (detail 293) onto rigging pads (detail 48, 49, and 50) and secure with knob (detail 51), typical six places, see detail A and B.
- (2) Install clamp half (detail 188) over flange of 74A350714 side frame and secure to clamp half (detail 293) by tightening cap screw (detail 187) with retainer (detail 295). Typical four places for 74A350705 latches, see detail A.
- (3) Install clamp half (detail 294) over flange of 74A350714 side frame and secure to clamp half (detail 293) by tightening cap screw (detail 304) with retainer (detail 295). Typical two places for 74A350709 latches, see detail B.

(4) Rotate drill blanket (detail 22, 24 or 23, 25) in position and secure by installing L-pin (detail 369), typical eight places, see detail C.

(5) At hole location 189 through 212:

- (a) Install traveler bushing (detail 59) in drill bushing (detail 210), detail D.
- (b) Drill 0.257 +0.007 -0.000 inch diameter hole. See figure 15 for drilling information.
- c. Install 74A350705 and/or 74A350709 latch:

- (1) Install latch locator (detail 297) onto rigging pads (detail 48, 49, and 50) and secure with knob (detail 51), typical six places, see detail E.
- (2) Insert feeler gage between latch locator (detail 297) and outboard surface of 74A350714 side frame to determine thickness of 74A350747 peel shim required, detail F.
- (3) Remove latch locator (detail 297).
- (4) Position latches, 74A350706 plate, and 74A350747 shim on 74A350714 side frame by installing bolt and washer into gang channel.
- (5) Locate latches in position when ambient temperature is 70° F per substeps below:

- (a) Position latch locator (detail 296) onto rigging pads (detail 48, 49, and 50) by inserting L-pin (detail 301) and secure by installing knob (detail 51), typical six places, see detail G.
- (b) Adjust latches in 74A350706 serrated plate until latch contacts locator dowel (detail 300), detail H.



Sealing Compound

7

- (c) Apply sealing compound to fastener threads and torque to 50-70 inch-pounds.

(6) Locate latches in position when ambient temperature is above or below 70° F per substeps below:

(a) Install latch locator (detail 296) onto rigging pads (detail 48, 49, and 50) and temporarily secure with knob (detail 51), typical six places, detail G.

(b) Determine ambient temperature and select corresponding correction dimension from chart, detail J.

(c) Position latch locator (detail 296) to proper correction dimension between lower surface of latch locator (detail 296) and dowel pin (detail 299), detail H.

(d) Secure latch locator (detail 296) in position by tightening knob (detail 51), detail H.

(e) Adjust latches in 74A350706 serrated plate until latch contacts locator dowel (detail 300), detail H.

(f) Apply sealing compound to fastener threads and torque to 50-70 inch-pounds.

(7) Confirm X plane location of latches by checking for 0.100 inch gap between latch locator (detail 296) and inboard surface of latches, typical six places, see detail H.

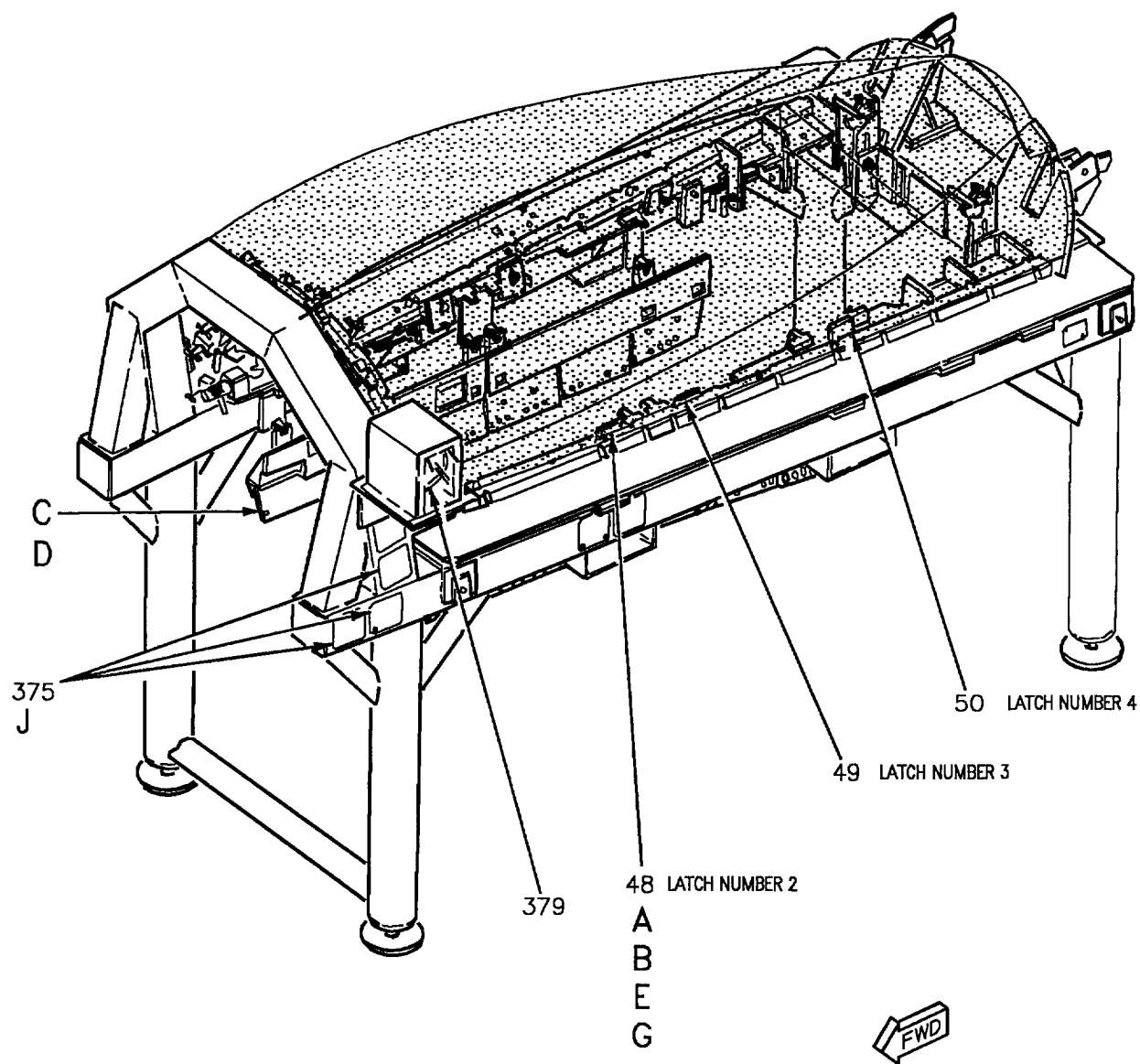
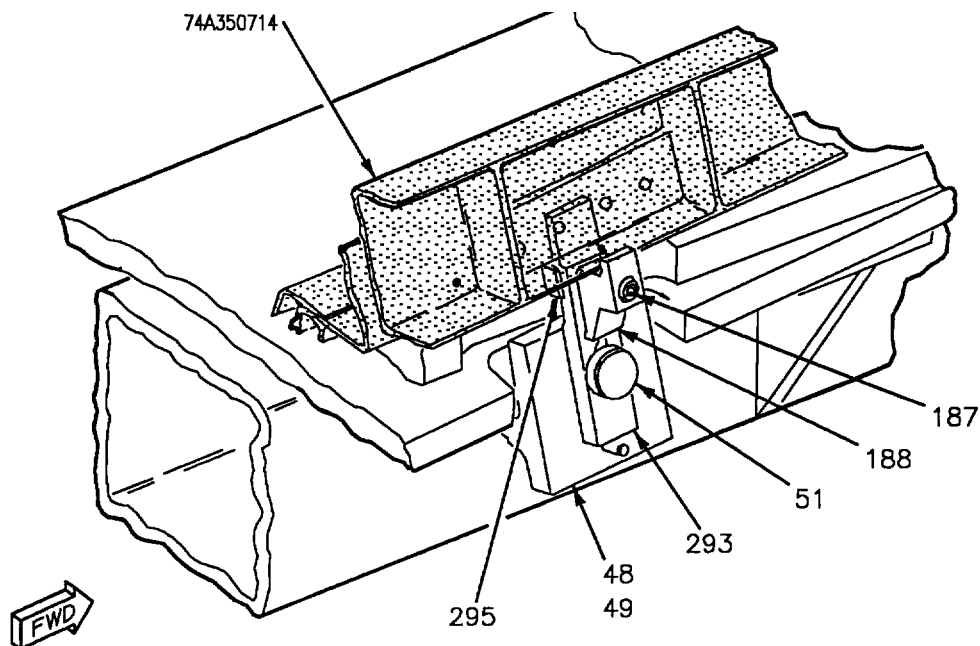
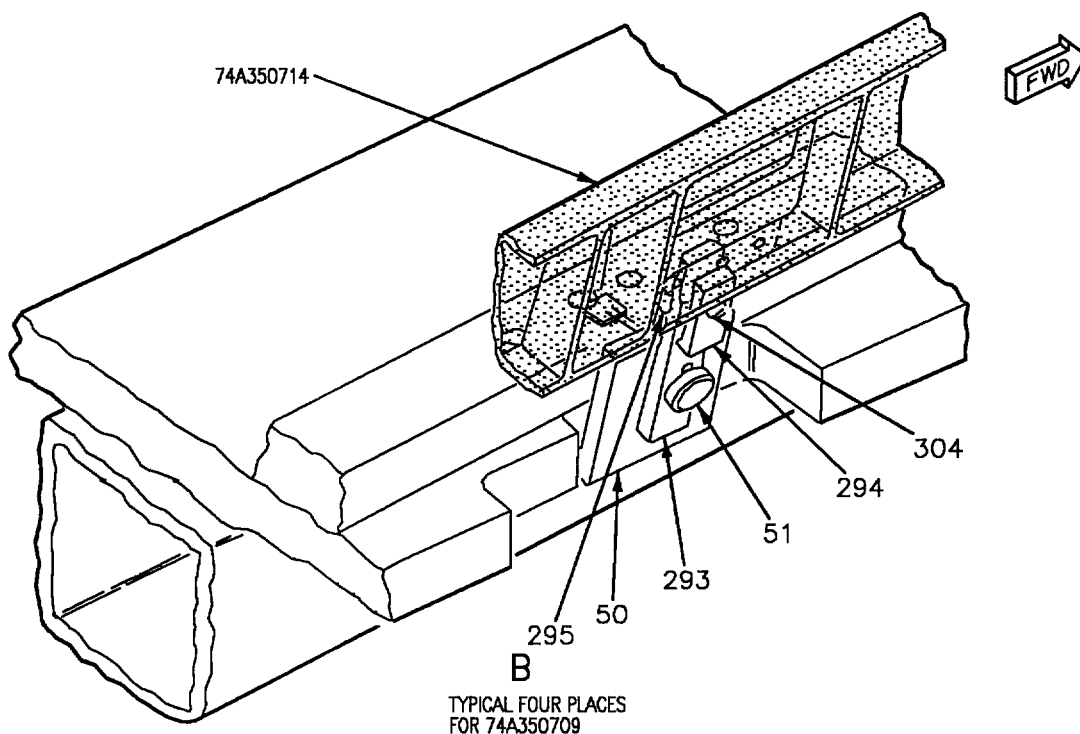


Figure 14. Replacement - Latch (Sheet 1)



A
TYPICAL FOUR PLACES
FOR 74A350705



B
TYPICAL FOUR PLACES
FOR 74A350709

Figure 14. Replacement - Latch (Sheet 2)

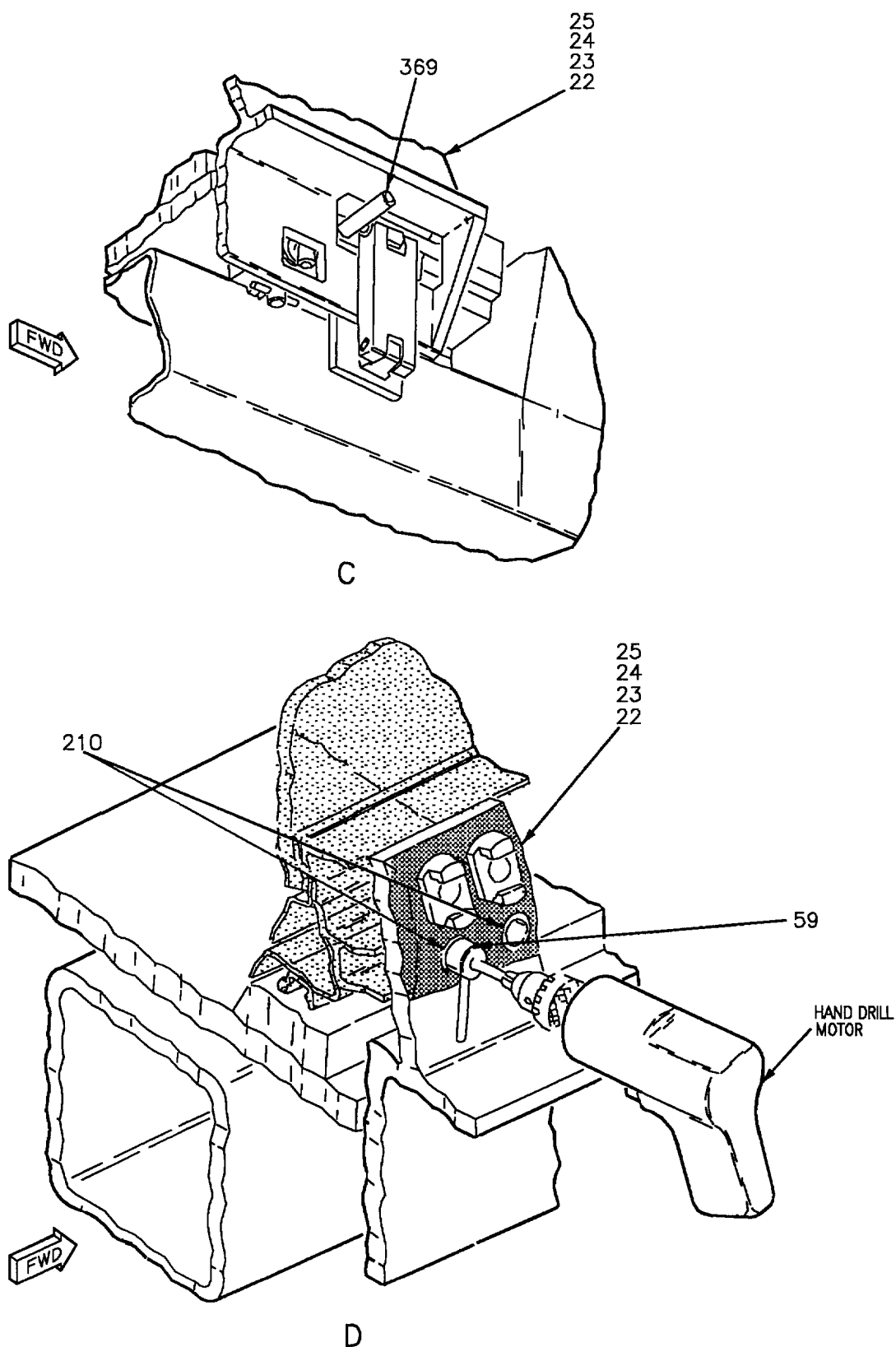


Figure 14. Replacement - Latch (Sheet 3)

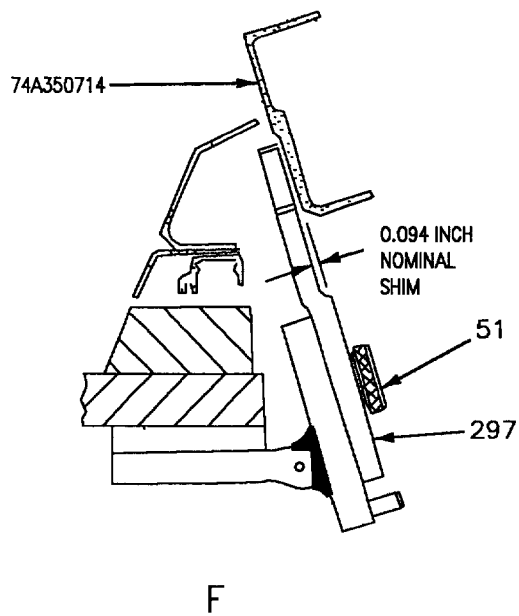
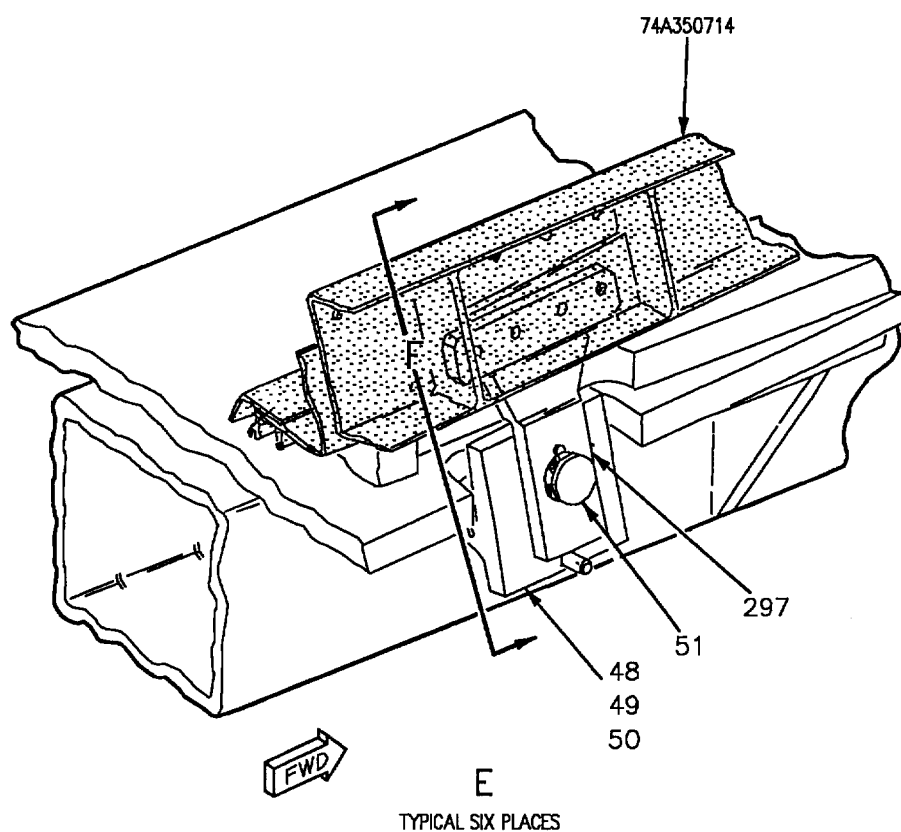


Figure 14. Replacement - Latch (Sheet 4)

LATCH #2	
AMBIENT TEMP.F°	CORRECTION DIM
40°	0.058
50°	0.071
60°	0.085
70°	0.100
80°	0.115
90°	0.130
100°	0.144
110°	0.159
120°	0.173
130°	0.186

LATCH #3	
AMBIENT TEMP.F°	CORRECTION DIM.
40°	0.057
50°	0.070
60°	0.085
70°	0.100
80°	0.115
90°	0.131
100°	0.147
110°	0.162
120°	0.178
130°	0.192

LATCH #4	
AMBIENT TEMP.F°	CORRECTION DIM.
40°	0.068
50°	0.078
60°	0.089
70°	0.100
80°	0.111
90°	0.123
100°	0.135
110°	0.147
120°	0.159
130°	0.171

J

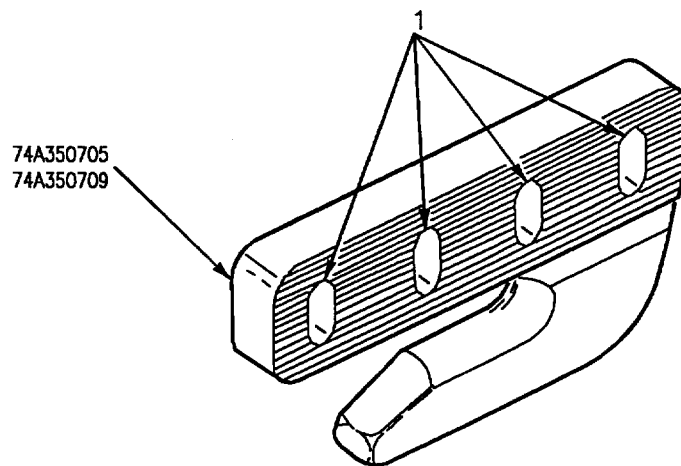
LEGEND

1. FOR AMBIENT TEMPERATURES ABOVE OR BELOW 70°F, ADJUST FROM NOMINAL CONTROL DIMENSION OF LATCHES (0.100 INCH) BY USING DIMENSIONS SHOWN IN CORRECTION COLUMN OF CHART.
2. LATCH SERRATIONS ARE 0.031 INCH BETWEEN CENTERS. SERRATIONS ON LATCH MUST SEAT WITH SERRATIONS ON 74A350706 PLATE.

Figure 14. Replacement - Latch (Sheet 6)

DETAIL NO.	NAME	FUNCTION
22, 23, 24, 25	Drill blanket	Locates canopy latch attachment holes for drilling procedures.
48	Rigging pad	Rigging pad for latch no. 2 contains attachment points for latch locator (detail 296, 297) and clamp half (detail 293).
49	Rigging pad	Rigging pad for latch no. 3 contains attachment points for latch locator (detail 296, 297) and clamp half (detail 293).
50	Rigging pad	Rigging pad for latch no. 4 contains attachment points for latch locator (detail 296, 297) and clamp half (detail 293).
51	Knob	Secures latch locator (detail 296, 297) and clamp half (detail 293) to rigging pads (detail 48, 49, 50).
59	Traveler bushing	Guides 0.257 +0.007 -0.000 inch drill.
187	Cap screw	Secures clamp halves (detail 188 and 293).
188	Clamp half	Used with clamp half (detail 293) to secure 74A350714 side frame.
210	Drill bushing	Guides traveler bushing (detail 59).
293	Clamp half	Used with clamp half (detail 188 or 294) to secure 74A350714 side frame.
294	Clamp half	Used with clamp half (detail 293) to secure 74A350714 side frame.
295	Retainer	Used with cap screw (detail 187 or 304) to secure clamp half (detail 293 and 188), or (detail 293 and 294).
296	Latch locator	Used to set latch no. 2, 3, or 4 at correct setting.
297	Latch locator	Used to determine correct shim thickness for latch no. 2, 3, or 4.
299	Dowel pin	Used as a reference point in measuring rigging dimension of latch no. 2, 3, or 4.
300	Locator dowel	Used as a rigging stop to set latch no. 2, 3, or 4.
301	L-pin	Locates latch locator (detail 296) at 70°F on rigging pads (detail 48, 49, 50).
304	Cap screw	Secures clamp half (detail 293 and 294).
369	L-pin	Locates drill blanket (detail 22, 23, 24, and 25).
375	Rigging tables	Used to calculate rigging dimensions at various temperatures for individual latches.
379	Thermometer	Used to measure temperatures of tool and canopy for rigging.

Figure 14. Replacement - Latch (Sheet 7)



05021501

INDEX NO.	HOLE NO.	QTY	HOLE SIZE		FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1	189 thru 212	24	2		NAS674V12 1	AN960C416L		G18421JL2-4-8
LEGEND								
1 Torque 50-70 in. lbs.								
2 Hole diameter in 74A350714 side frame is 0.257 +0.007 -0.000 inch at hole location 189 through 212.								

Figure 15. Latch, 74A350705 and/or 74A350709, Fastener Index

17. CONTROL CAM, 74A350741, RE-PLACEMENT. See figure 16.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, Canopy	RE174350004-1
Repair Kit, Canopy	RE274350004-1
Torque Wrench, 5 to 150 Inch-Pounds	-
Torque Wrench, 0 to 300 Inch-Pounds	-

Materials Required

None



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

a. Make sure canopy is loaded correctly and secure (WP005 01).

b. If drilling control cam attach holes in new 74A350714 side frame and 74A350726 channel is required, do the following steps:

(1) Position upper surface of drill template (detail 215, 177) net with lower surface of 74A350726 channel, detail A.

(2) Insert locator pin (detail 218) through drill template (detail 215, 177) into aft attachment hole for latch number 4, detail A.

(3) Position outboard edge of drill template (detail 215, 177) net with 74A350722 lower fairing support, detail A.

(4) Secure drill template in position with C-clamp, detail A.

(5) At hole location 252 and 254, drill 0.250 +0.006 -0.000 inch diameter hole using L-type drill motor in drill bushing (detail 216). See detail B and figure 17 for drilling information.

(6) At hole location 251 and 253, drill 0.375 +0.007 -0.000 inch diameter hole using hand drill in drill bushing (detail 217). See detail C and figure 17 for drilling information.

c. Install control cam:

(1) Position locator pin (detail 165 and 219) in 74A350712 and 74A350713 seal retainers in the locating position, detail D and E.

(2) Install dummy roller (detail 245) in bushing (detail 354), detail F and G.

(3) Determine ambient temperature and select corresponding correction dimension from chart, detail J.

(4) Temporarily install control cam, 74A350704 plate, and 74A350707 solid shim on mating structure by installing bolt, washer, and nut.

(5) Adjust nuts to maintain correction dimension between lower surface of dummy roller (detail 245) and upper face of control cam arm, detail H.

(6) Insert feeler gage between upper surface of 74A350707 solid shim and lower surface of 74A350726 channel to determine thickness of 74A350707 peel shim required, detail H.

(7) Remove bolt, washer, and nut to install 74A350707 peel shim on top of 74A350707 solid shim; reinstall bolt, washer, and nut.

(8) Position control cam in correct Y plane location by maintaining 0.164 ± 0.016 inch dimension between aft surface of dummy roller (detail 245) and forward face of control cam, detail H.

(9) Confirm X plane location of control cam by checking for 0.19 ± 0.12 inch gap between inboard surface of locator plate (detail 265) and outboard face of control cam, detail G.

(10) At hole location 252 or 254, torque nut to 50-70 inch-pounds and at hole location 251 or 253, torque nut to 160-190 inch-pounds. See figure 17.

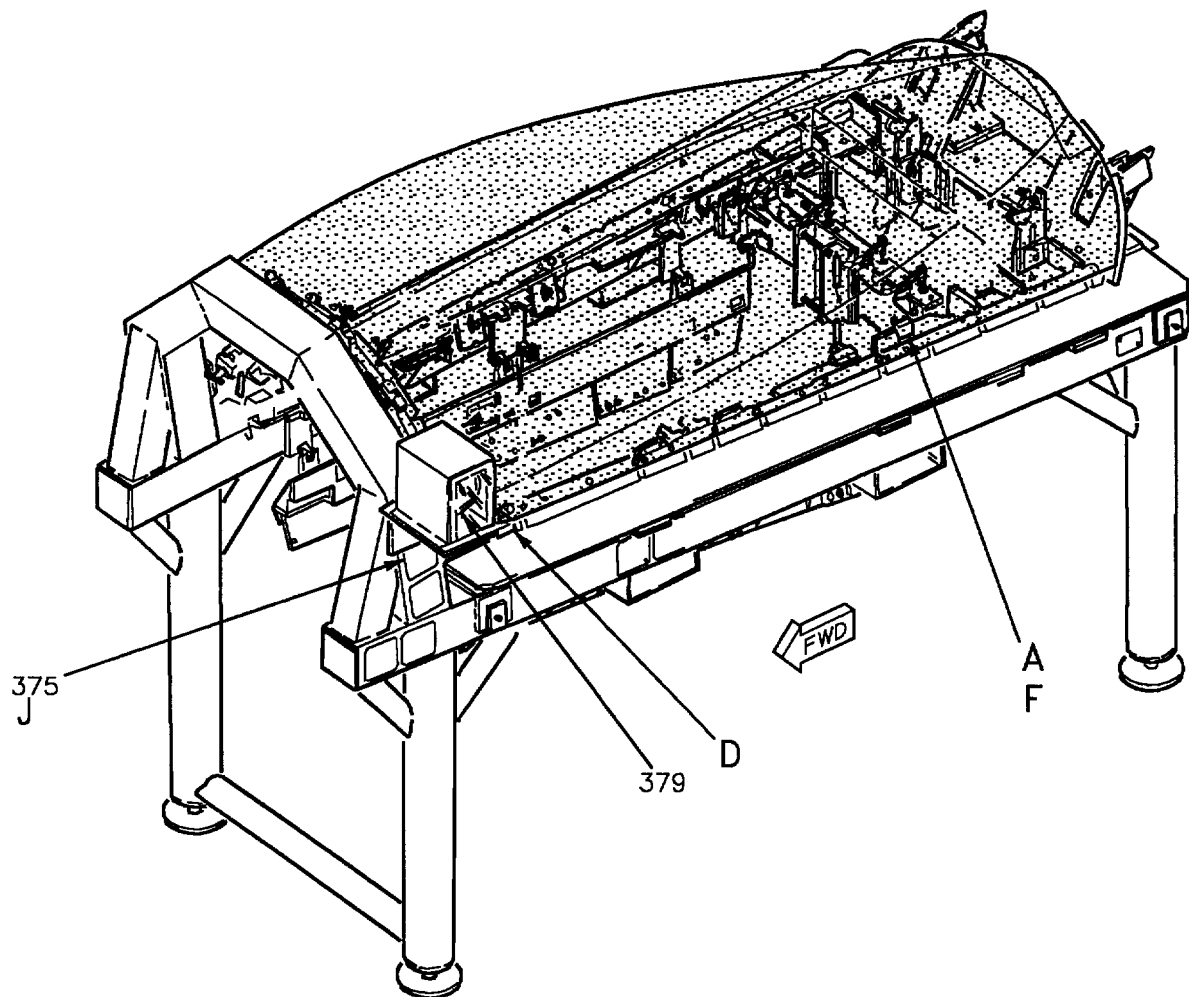
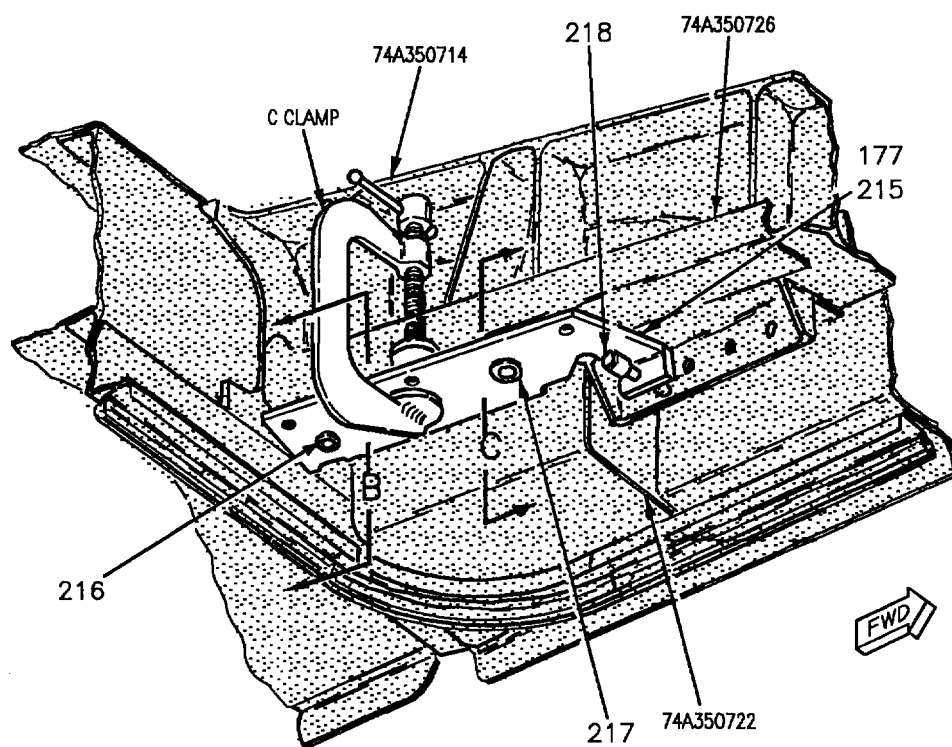
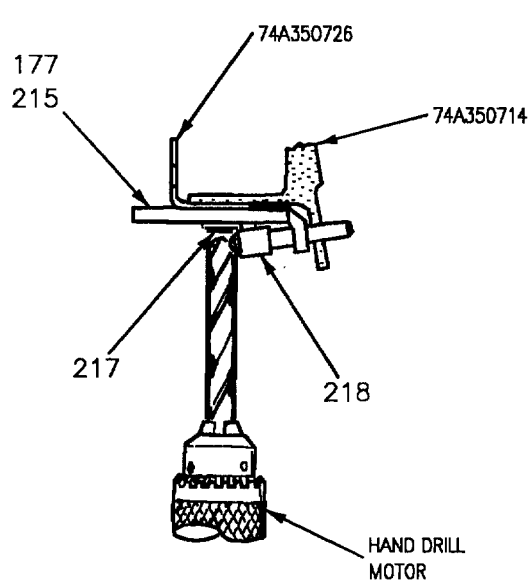


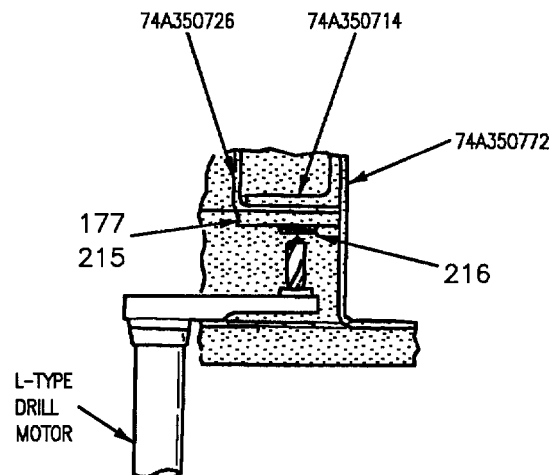
Figure 16. Replacement - Control Cam (Sheet 1)



A



C



B

Figure 16. Replacement - Control Cam (Sheet 2)

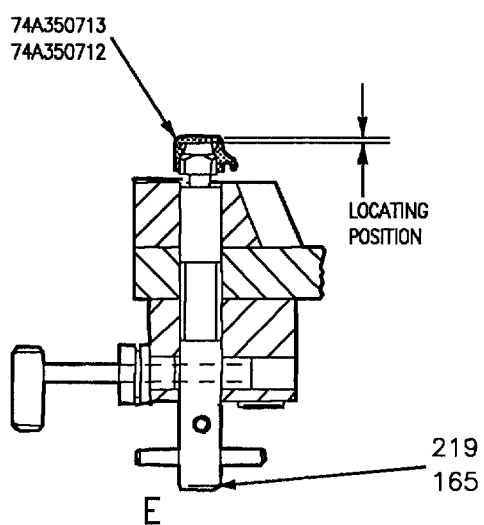
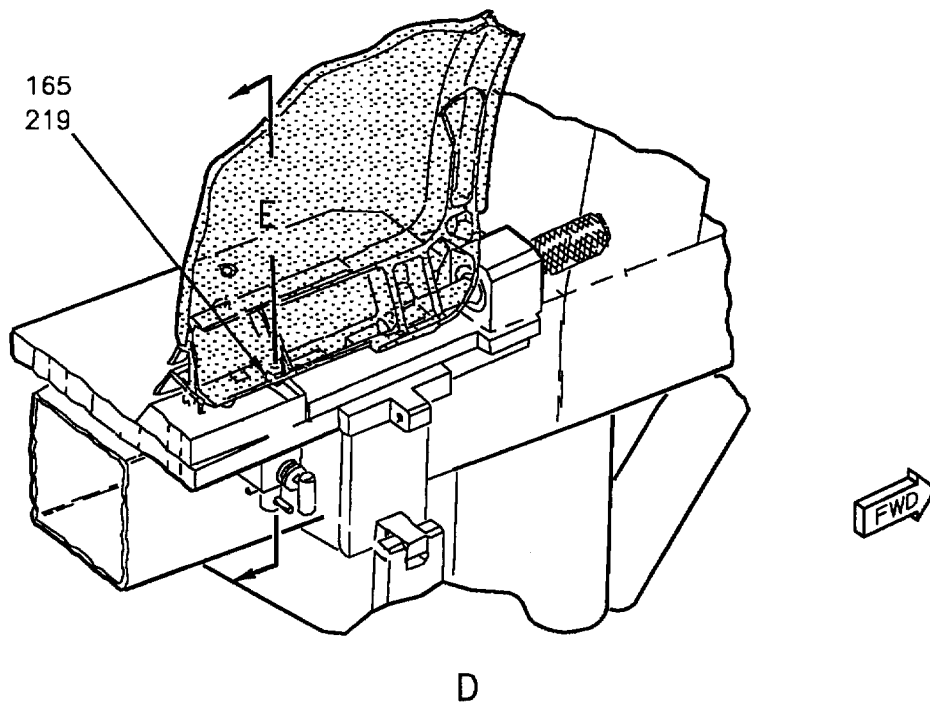


Figure 16. Replacement - Control Cam (Sheet 3)

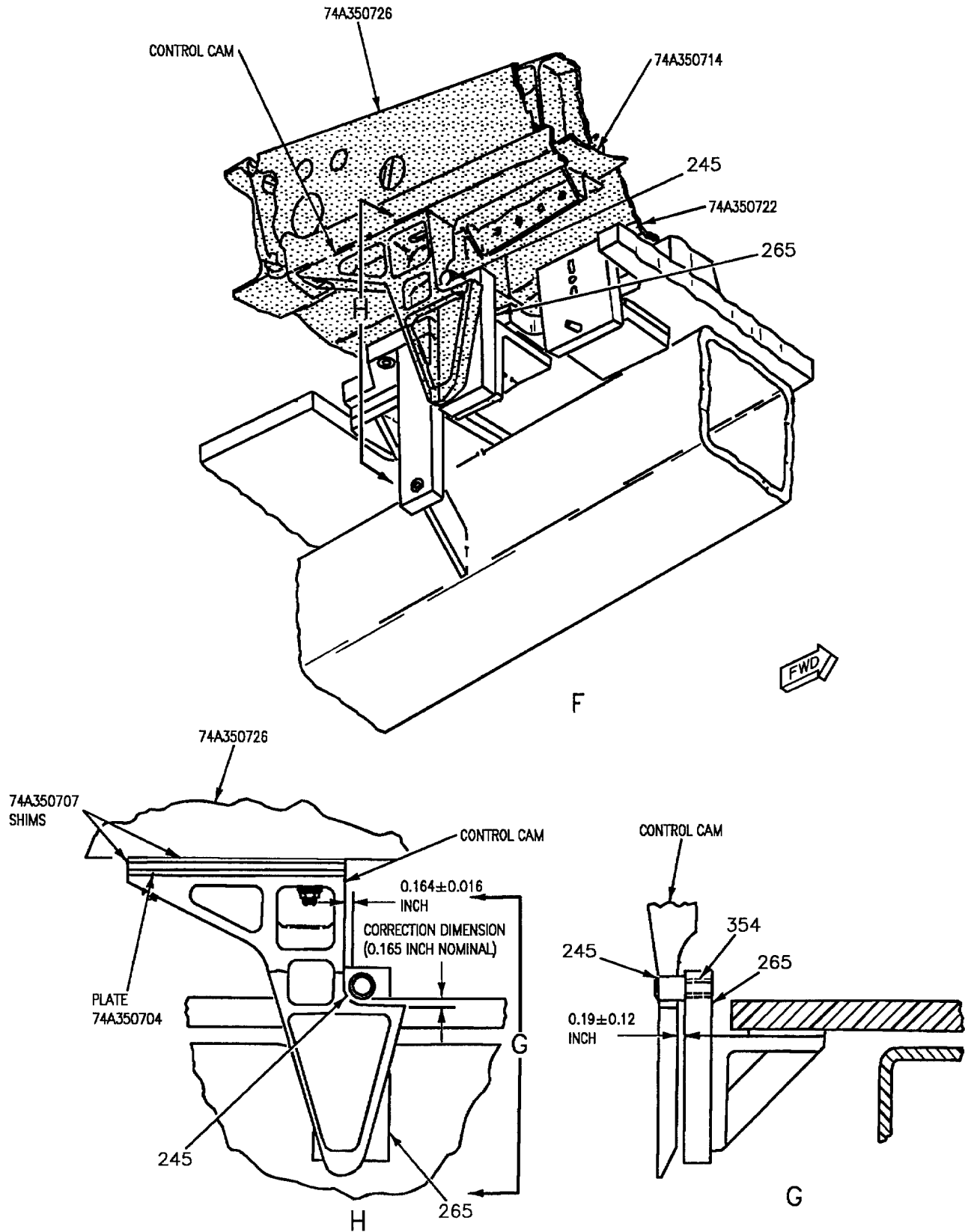


Figure 16. Replacement - Control Cam (Sheet 4)

CONTROL CAM #5	
AMBIENT TEMP F°	CORRECTION DIM
40°	0.197
50°	0.187
60°	0.176
70°	0.165
80°	0.154
90°	0.142
100°	0.130
110°	0.118
120°	0.106
130°	0.094

LEGEND

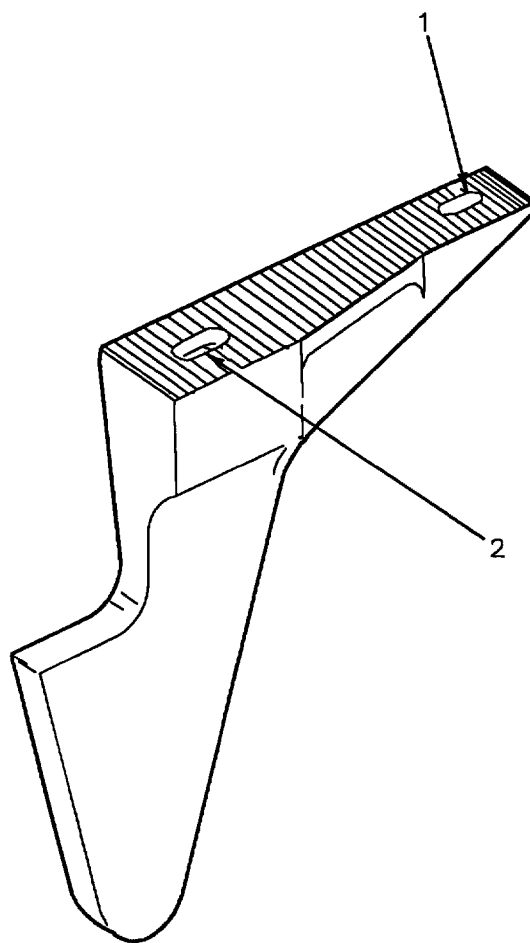
1. FOR AMBIENT TEMPERATURES ABOVE OR BELOW 70°F, ADJUST FROM NOMINAL CONTROL DIMENSION OF CONTROL CAM (0.165 INCH) BY USING DIMENSIONS SHOWN IN CORRECTION COLUMN OF CHART.
2. CONTROL CAM SERRATIONS ARE 0.031 INCH BETWEEN CENTERS. SERRATIONS ON CONTROL CAM MUST SEAT WITH SERRATIONS ON 74A350704 PLATE.

J

Figure 16. Replacement - Control Cam (Sheet 5)

DETAIL NO.	NAME	FUNCTION
165	Locator pin	Locates 74A350713 seal retainer.
177	Drill template	Provides hole location for control cam, right side.
215	Drill template	Provides hole location for control cam, left side.
216	Drill bushing	Guides 0.250 inch diameter drill.
217	Drill bushing	Guides 0.375 inch diameter drill.
218	Locator pin	Locates drill template (detail 215, 177) in position using latch number 4 attach hole.
219	Locator pin	Locates side seal retainers 74A350712.
245	Dummy roller	Used in rigging control cam.
265	Locator plate	Provides attachment point for dummy roller (detail 245).
354	Bushing	Locates dummy roller (detail 245) in locator plate (detail 265).
375	Rigging tables	Used to calculate rigging dimensions at various temperatures for control cam.
379	Thermometer	Used to measure temperature of tool and canopy for rigging.

Figure 16. Replacement - Control Cam (Sheet 6)



05021701

INDEX NO.	HOLE NO.	QTY	HOLE SIZE		FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1	252, 254	2	3		NAS674V14 1	AN960C416L 5		NAS1291C4M
2	251, 253	2	4		NAS676V14 2	AN960C616L 5		NAS1291C6M
LEGEND 1 Torque 50-70 in. lbs. 2 Torque 160-190 in. lbs. 3 Hole diameter in 74A350726 channel and 74A350714 side frame is 0.250 +0.006 -0.000 at hole location 252 and 254. 4 Hole diameter in 74A350726 channel and 74A350714 side frame is 0.375 +0.007 -0.000 at hole location 251 and 253. 5 Two required, install one under bolt head and one under nut.								

Figure 17. Control Cam, 74A350741, Fastener Index

18. SIDE FAIRING, 74A350721, INSPECTION AND REPLACEMENT. See figure 18.



Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, Canopy	RE174350004-1
Repair Kit, Canopy	RE274350004-1
Torque Wrench, 5 to 50 Inch-Pounds	-

Materials Required

Nomenclature	Specification or Part Number
Cheesecloth	CCC-C-440, Type 1, Class 1
Methyl Ethyl Ketone	TT-M-261
Sealing Compound	MIL-S-83430, Class A-1/2

19. INSPECTION.



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

a. Make sure canopy is loaded correctly and secure (WP005 01).

b. Position locator assembly (detail 240, 241) on fixture base (detail 143, 144) by inserting L-pin (detail 198) four places and secure by installing handknob (detail 199) six places.

c. Install spreader bar (subassembly E):

(1) Retract end fitting (detail 45, 46) into spreader bar (subassembly E), detail A.

(2) Position spreader bar (subassembly E) so index pins (detail 202, 203) are inserted into rocket motor mounts on 74A350714 side frame, detail A.

Failure to maintain 0.030 inch gap between both ends of spreader bar or forcibly extending spreader bar past limits can distort canopy structure and crack transparency.

(3) Twist turnbuckle (detail 212) to maintain 0.030 inch gap between turnbuckle stops (detail 213) and nut stop (detail 351, 142) until a 3.00 inch nominal dimension is established, detail A.

d. Retract L-pin (detail 155, 156) and rotate locator pin (detail 219) until roll pin (detail 227) faces forward and aft, detail A.

e. Raise locator pin (detail 219) until head of locator pin contacts inner surface of 74A350712 seal retainer, typical eight places, detail A.

f. Reinstall L-pin (detail 155, 156) to hold locator pin (detail 219) in position, detail A.

g. Inspect for a 0.125 ± 0.08 inch gap with wire type thickness gage (drill rod) between side fairing and locator block (detail 333, 334, 331, 332, 329, 330, 327, 328, 325, 326, 323, 324, 321, 322, 319, 320, 317, 318, 315, 316, 313, and 314), detail C.

h. Insert 0.110 inch "GO" side of gage (detail 56) between aft edge of side fairing and plate (detail 405, 406) to check that minimum allowable gap has not been exceeded, detail E.

i. Try to insert 0.155 inch "NO-GO" side of gage (detail 56) between aft edge of side fairing and plate (detail 405, 406) to check that maximum allowable gap has not been exceeded, detail E.

j. Remove locator assembly (detail 240, 241).

k. Install trim boards (detail 307, 309 and 308, 310) on fixture base (detail 143, 144) by inserting L-pin (detail 198) six places and secure with handknob (detail 199) twelve places, detail F.

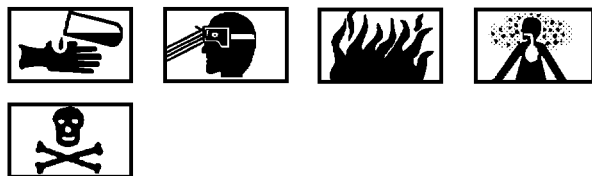
l. Insert 0.080 inch "GO" side of gage (detail 206) between trim board (detail 307, 309 and 308, 310) and lower edge of side fairing to check that minimum allowable gap has not been exceeded, detail G.

m. Try to insert 0.220 inch “NO-GO” side of gage (detail 206) between trim board (detail 307, 309 and 308, 310) and lower edge of side fairing to check that maximum allowable gap has not been exceeded, detail G.

20. REPLACEMENT.

a. Remove fasteners attaching side fairing to mating structure. See figure 19 for fastener location.

b. Remove damaged side fairing.



Methyl Ethyl Ketone

5

c. Clean all residual sealing compound from mating structure using plastic scraper and cheesecloth moistened with methyl ethyl ketone.

d. Locate new side fairing:

(1) Position forward edge of side fairing net to 74A350711 corner frame.

(2) Align upper edge of side fairing with 74A350700 transparency.

(3) Align upper aft corner of side fairing with corner of 74A350722 aft fairing.

(4) Secure side fairing to mating surface.

e. Locate blind holes (A1-F18AC-SRM-200, WP004 03).

f. Drill 0.195 +0.0007 -0.000 inch diameter hole. See figure 19 for hole location.

g. Countersink holes to flushness requirements of fastener.

h. Temporarily install enough fasteners to hold side fairing in correct position.

i. Scribe trim lower edge of side fairing;

(1) Position scribe (detail 204) on trim boards (detail 307, 309, and 308, 310), detail F.

(2) Scribe trim line in new side fairing by applying enough pressure to make sure scribe remains flat on trim boards.

j. Scribe trim aft edge of side fairing:

(1) Position scribe (detail 207) on trim board (detail 280), detail G.

(2) Scribe trim line in new side fairing by applying enough pressure to make sure scribe remains flat on trim board.

k. Remove side fairing.

l. Trim side fairing to scribed trim lines.

m. Apply finish system (A1-F18AC-SRM-500, WP021 00).



Sealing Compound

7

n. Fay surface seal between side fairing and mating structure (A1-F18AC-SMR-200, WP011 00).

o. Install fasteners and torque to 15-25 inch-pounds. See figure 19 for fastener information.

p. Fillet seal, see detail H and (A1-F18AC-SRM-200, WP011 00).

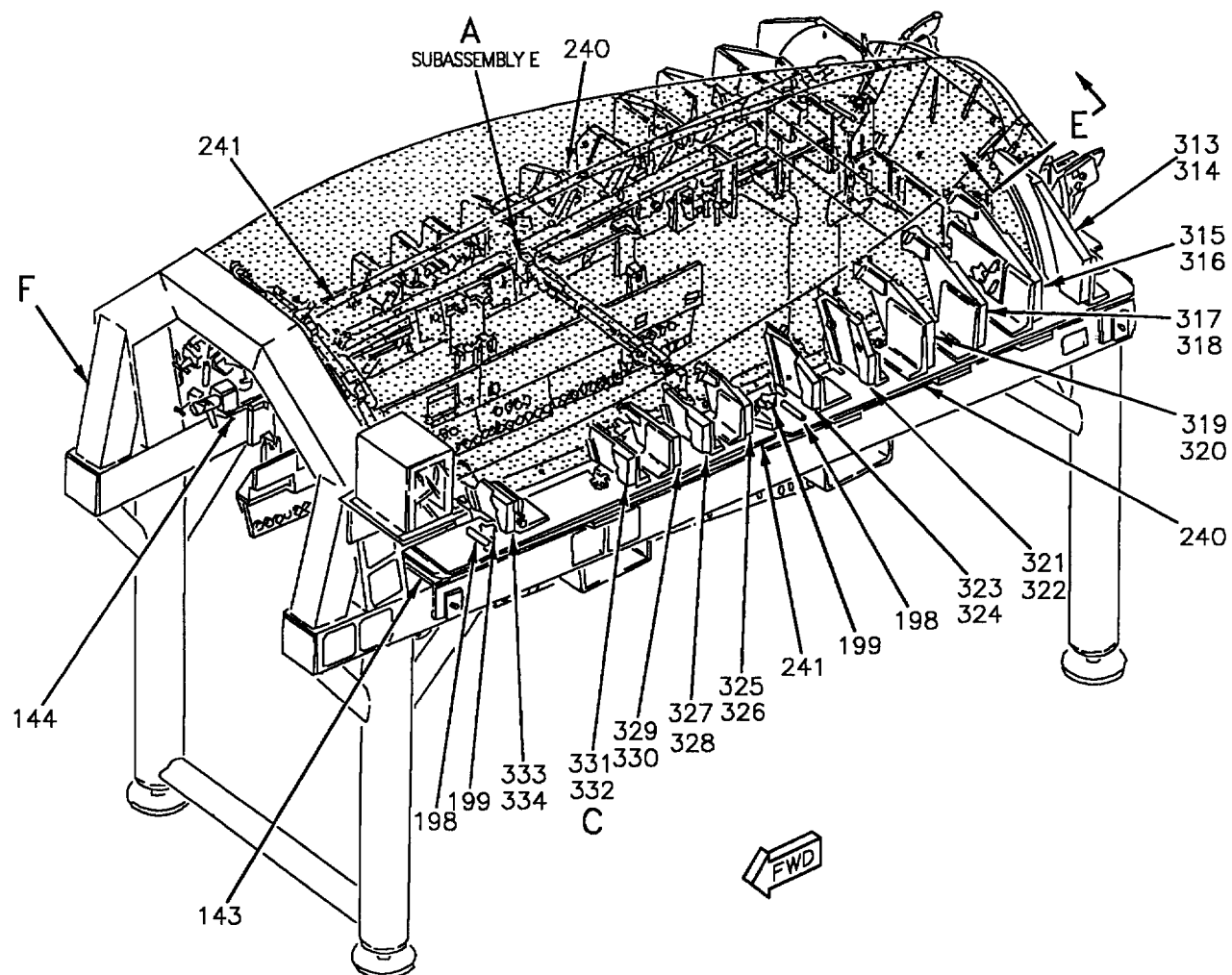


Figure 18. Inspection or Replacement - Side Fairing (Sheet 1)

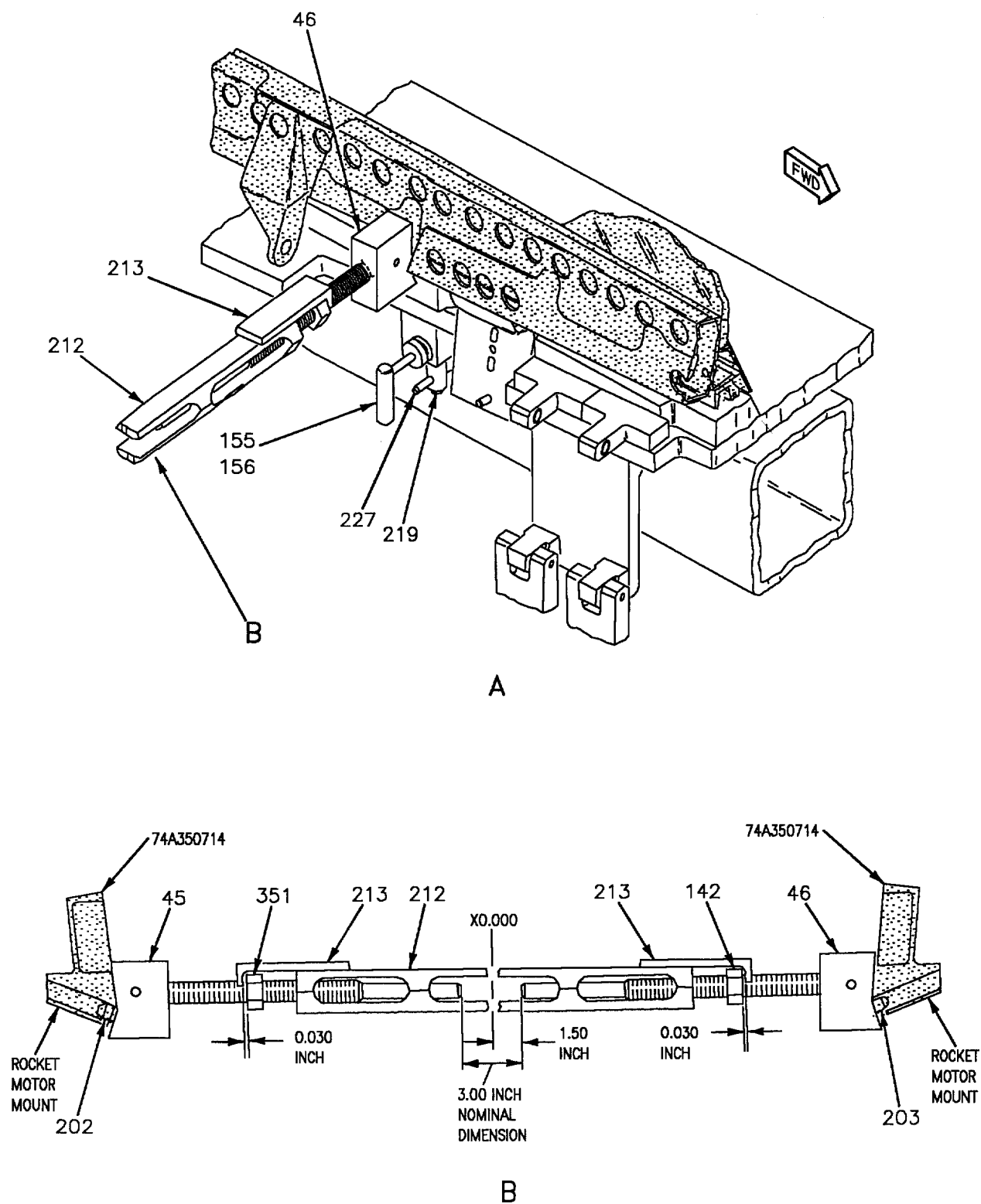


Figure 18. Inspection or Replacement - Side Fairing (Sheet 2)

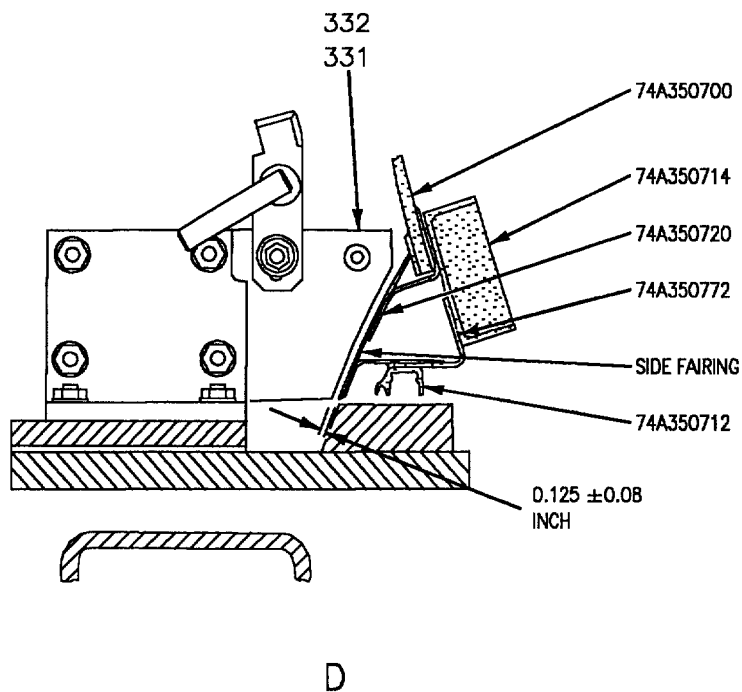
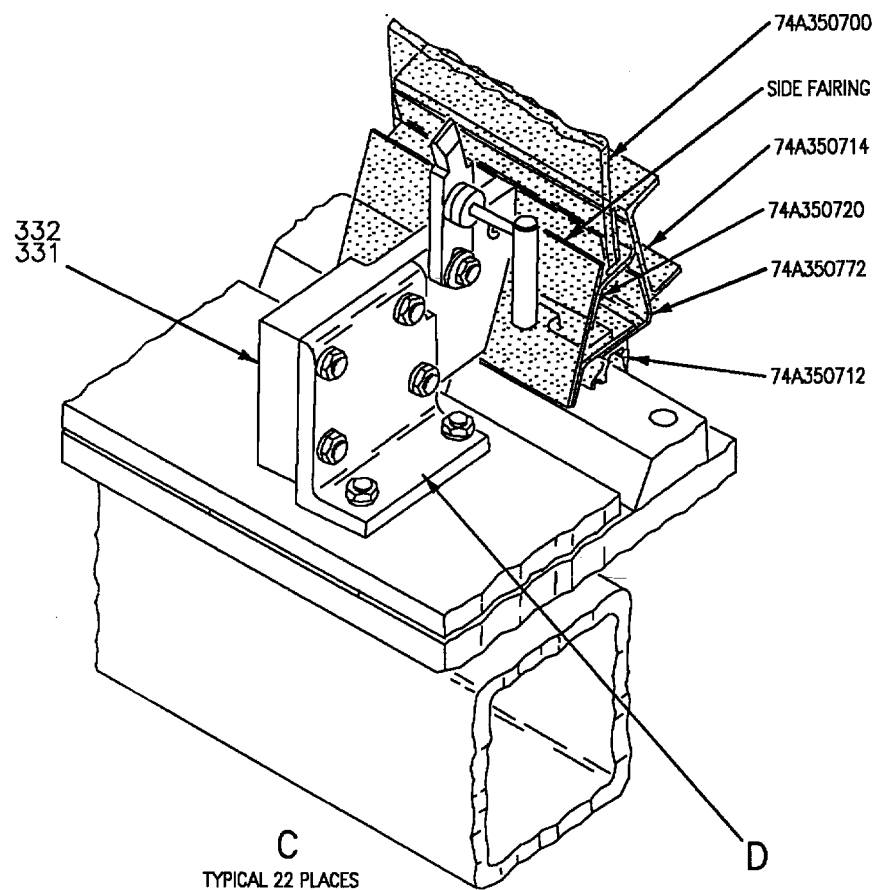


Figure 18. Inspection or Replacement - Side Fairing (Sheet 3)

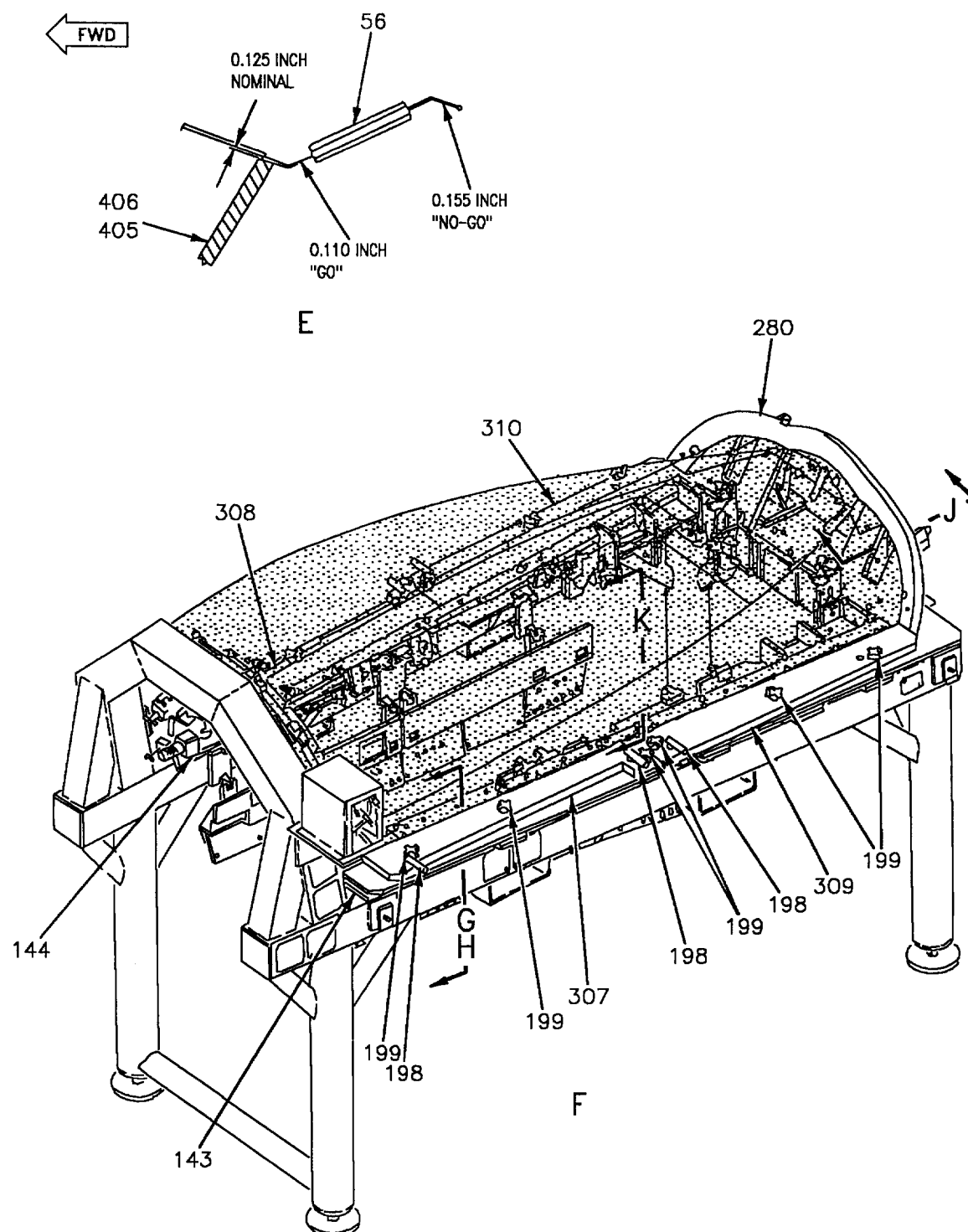
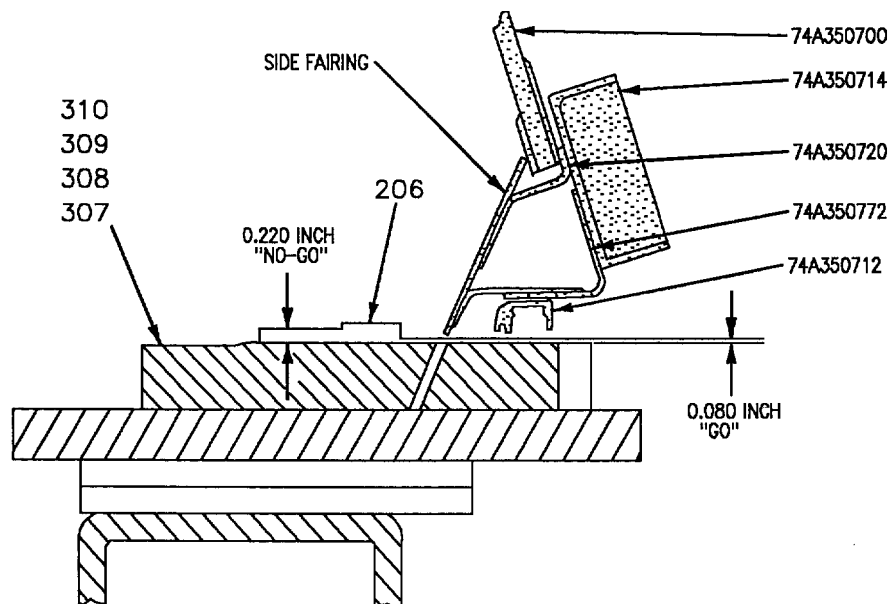
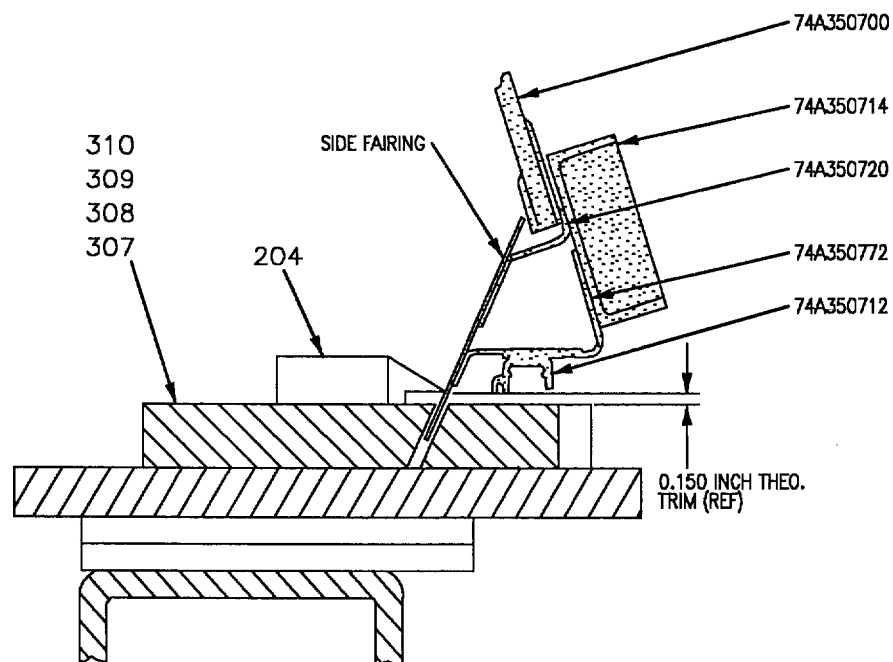


Figure 18. Inspection or Replacement - Side Fairing (Sheet 4)



G



H

Figure 18. Inspection or Replacement - Side Fairing (Sheet 5)

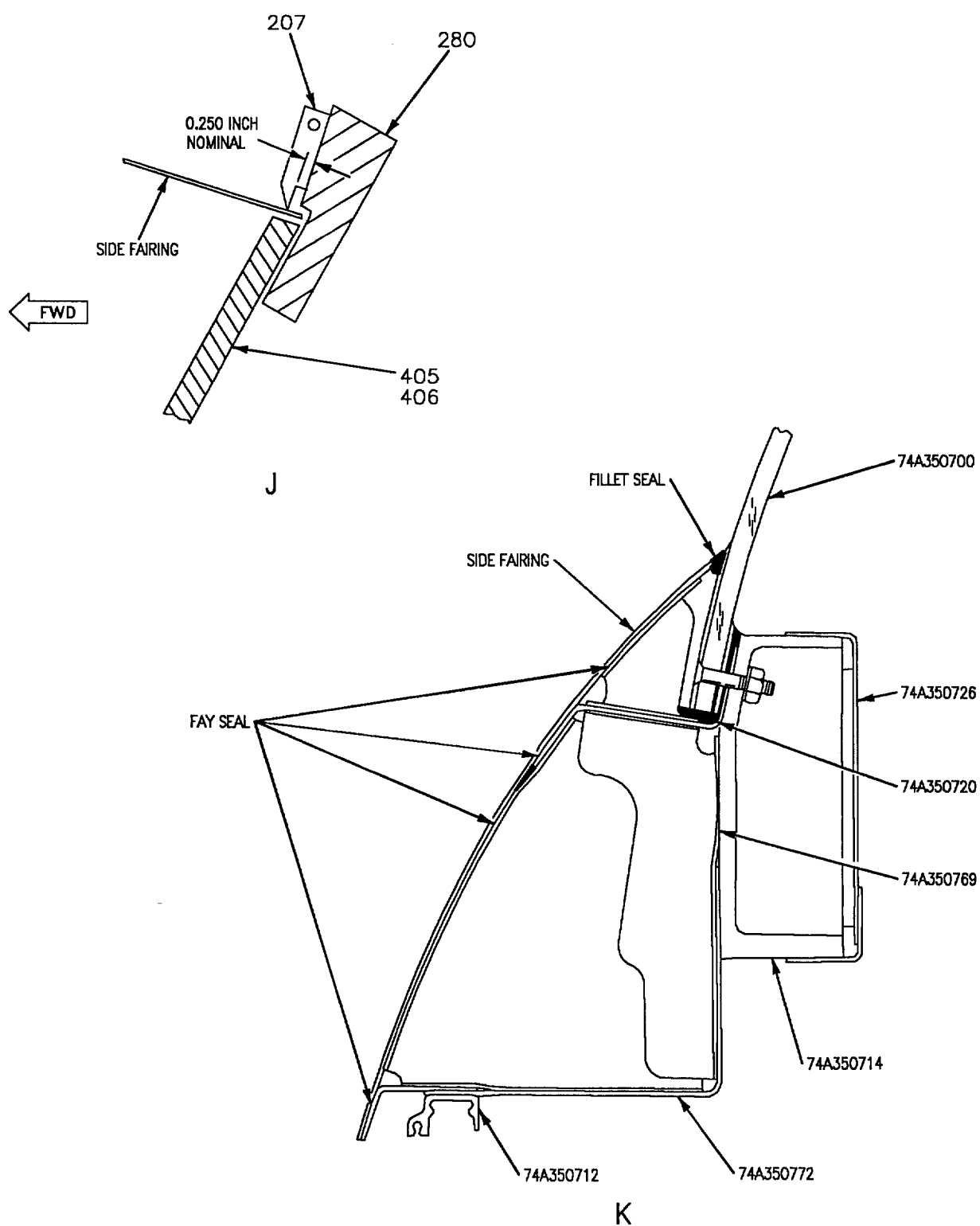


Figure 18. Inspection or Replacement - Side Fairing (Sheet 6)

DETAIL NO.	NAME	FUNCTION
Subassembly E 45, 46, 142, 202, 203, 212, 213, 351	Spreader bar	Holds canopy at rocket motor mounts to a predetermined dimension.
56	GO, NO-GO gage	Used to check aft edge limits of side fairing.
143, 144	Fixture base	Base of fixture on which most locators mount.
155, 156	L-pin	Retains locator pin (detail 219).
198	L-pin	Locates locator assembly (detail 240 and 241).
199	Handknob	Secures locator assembly (detail 240 and 241).
204	Scribe	Scribes lower edge trim line on side fairing.
206	GO, NO-GO gage	Used to check lower edge limits of side fairing.
207	Scribe	Scribes aft edge trim line on side fairing.
219	Locator pin	Locates canopy in correct Z plane location.
227	Roll pin	Used as a handle and directional indicator for locator pin (detail 219).
240, 241	Locator assembly	Contains various locators for positioning and checking side fairing.
280	Trim board	Provides trim line reference for inspecting or scribing aft edge trim lines on side fairing.
307, 308, 309, 310	Trim board	Provides trim line reference for inspecting or scribing lower edge trim line on side fairing.
313, 314	Locator block	Provides mold line reference and clamping ability at Y317.950.
315, 316	Locator block	Provides mold line reference and clamping ability at Y310.055.
317, 318	Locator block	Provides mold line reference and clamping ability at Y302.650.
319, 320	Locator block	Provides mold line reference and clamping ability at Y296.538.
321, 322	Locator block	Provides mold line reference and clamping ability at Y291.754.

Figure 18. Inspection or Replacement - Side Fairing (Sheet 7)

DETAIL NO.	NAME	FUNCTION
323, 324	Locator block	Provides mold line reference and clamping ability at Y284.289.
325, 326	Locator block	Provides mold line reference and clamping ability at Y275.501.
327, 328	Locator block	Provides mold line reference and clamping ability at Y270.981.
329, 330	Locator block	Provides mold line reference and clamping ability at Y265.971.
331, 332	Locator block	Provides mold line reference and clamping ability at Y261.359.
333, 334	Locator block	Provides mold line reference and clamping ability at Y246.191.
405, 406	Plate	Provides mold line reference for side fairing.

Figure 18. Inspection or Replacement - Side Fairing (Sheet 8)

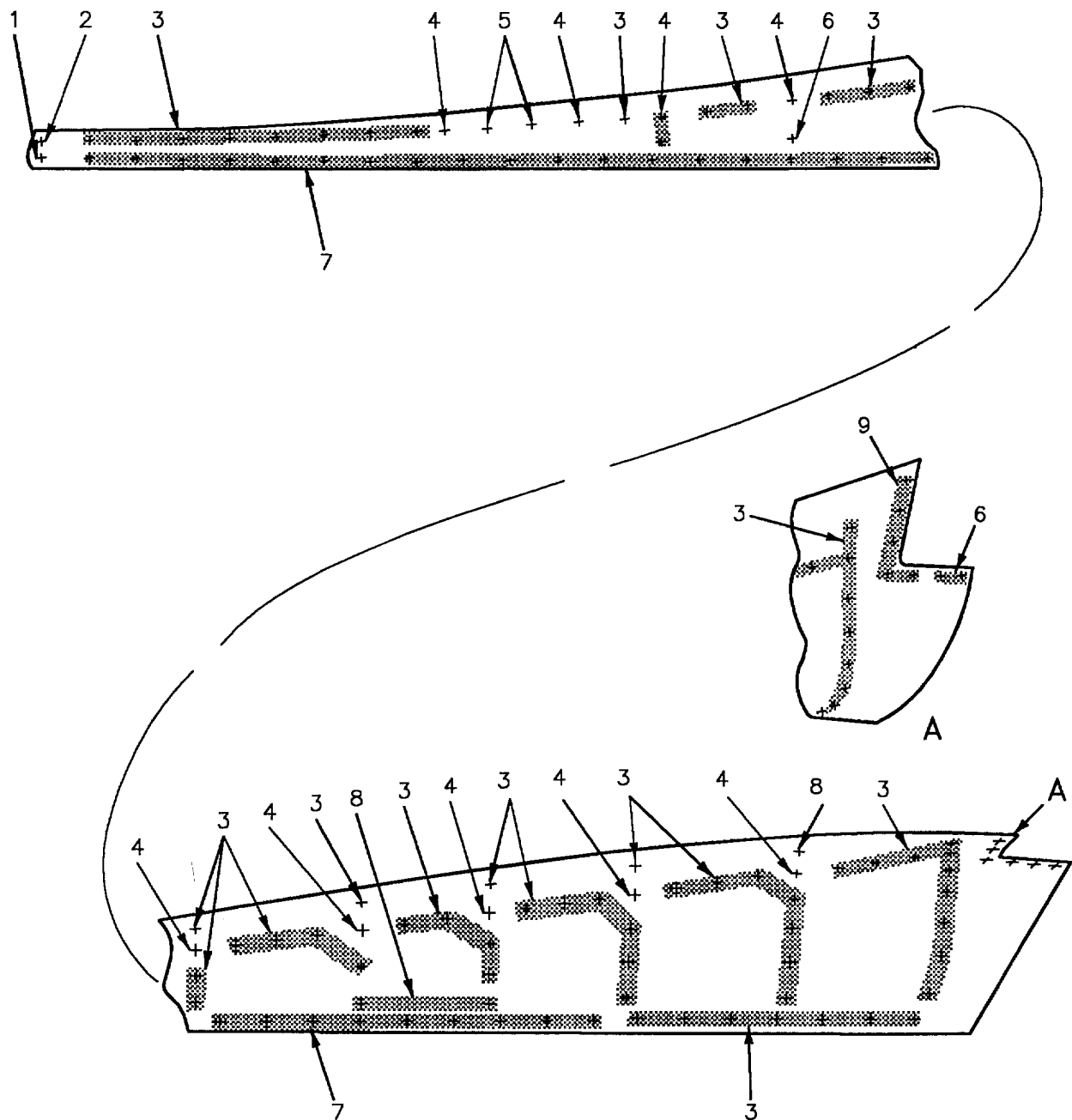


Figure 19. Side Fairing, 74A350721, Fastener Index (Sheet 1)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE		FASTENER 1 4	WASHER	SPACER BUSHING	RETAINER
1		2	0.195 +0.007 -0.0000		HT4041-3-3-5	NAS620C10L		NAS1291C3M
2		2	0.195 +0.007 -0.000		HT4041-3-3-5			F50403-3-1 2
3		116	0.195 +0.007 -0.000		HT4041-3-3-5			F49249E3-2 2
4		20	0.195 +0.007 -0.000		HT4041-3-3-5			F49251E3-1 2
5		4	0.195 +0.007 -0.000		HT4041-3-3-5			F49249E3-1 3
6		6	0.195 +0.007 -0.000		HT4041-3-3-5			F49249E3-1 2
7		56	0.195 +0.007 -0.000		HT4041-3-2-5	NAS620C10		NAS1291C3M
8		6	0.195 +0.007 -0.000		HT4041-3-3-5			F49251E3-2 2
9		10	0.195 +0.007 -0.000		HT4041-3-3-5	AN960C10L		NAS1291C3M
<p style="text-align: center;">LEGEND</p> <p>1 For oversize repair fasteners, see (A1-F18AC-SRM-200, WP004 07).</p> <p>2 Attach plate nuts to structure with 1415-0306 rivets.</p> <p>3 Attach plate nut to structure with RV1241-3-3 rivets.</p> <p>4 Torque 15-25 in. lbs.</p>								

Figure 19. Side Fairing, 74A350721, Fastener Index (Sheet 2)

21. **SIDE SEAL RETAINER, 74A350712, INSPECTION AND REPLACEMENT.** See figure 20.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, Canopy	RE174350004-1
Repair Kit, Canopy	RE274350004-1

Materials Required

Nomenclature	Specification or Part Number
Cheesecloth	CCC-C-440, Type 1, Class 1
Methyl Ethyl Ketone	TT-M-261
Rivet, Solid	MS20426AD5
Sealing Compound	MIL-S-83430, Class A-1/2

22. INSPECTION.



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

- Make sure canopy is loaded correctly and secure (WP005 01).
- Rotate locator pin (detail 219) to locating position, detail A and C.
- Raise locator pin (detail 219) to Z plane location and install L-pin (detail 155) two places and L-pin (detail 156) six places, detail D.
- If L-pin (detail 155 or 156) cannot be inserted, rotate locator pin (detail 219) to clearance fit position and measure for 0.125 inch nominal dimension be-

tween dowel pin (detail 277) and pad (detail 362), detail D.

- If gap between dowel pin (detail 277) and pad (detail 362) exceeds 0.125 inch nominal dimension, side seal retainer is out of tolerance and must be replaced.

23. REPLACEMENT.

- Remove 74A350721 side fairing.
- Remove fasteners attaching damaged side seal retainer to 74A350772 lower fairing support.



Methyl Ethyl Ketone

5

- Clean all residual sealing compound from mating structure using plastic scraper and cheesecloth moistened with methyl ethyl ketone.

- Position new side seal retainer over locator pin (detail 219) and under 74A350772 lower fairing support.

- Rotate locator pin (detail 219) to the locating position, detail A and C.

- Raise locator pin (detail 219) to Z plane location and install L-pin (detail 155) two places and L-pin (detail 156) six places, detail C.

- Locate fastener pattern in side seal retainer using existing holes in 74A350772 lower fairing support.

- Drill 0.159 +0.007 -0.000 inch diameter hole 49 places each side.

- Countersink holes in side seal retainer to the flushness requirement of fastener.

- Apply finish system (A1-F18AC-SRM-500, WP021 00).



Sealing Compound

7

k. Fay surface seal between side seal retainer and 74A350772 lower fairing support (A1-F18AC-SRM-200, WP011 00).

l. Wet install MS20426AD5 rivets 49 places each side (A1-F18AC-SRM-200, WP011 00).

m. Fillet seal areas indicated, detail E.

n. Reinstall 74A350721 side fairing.

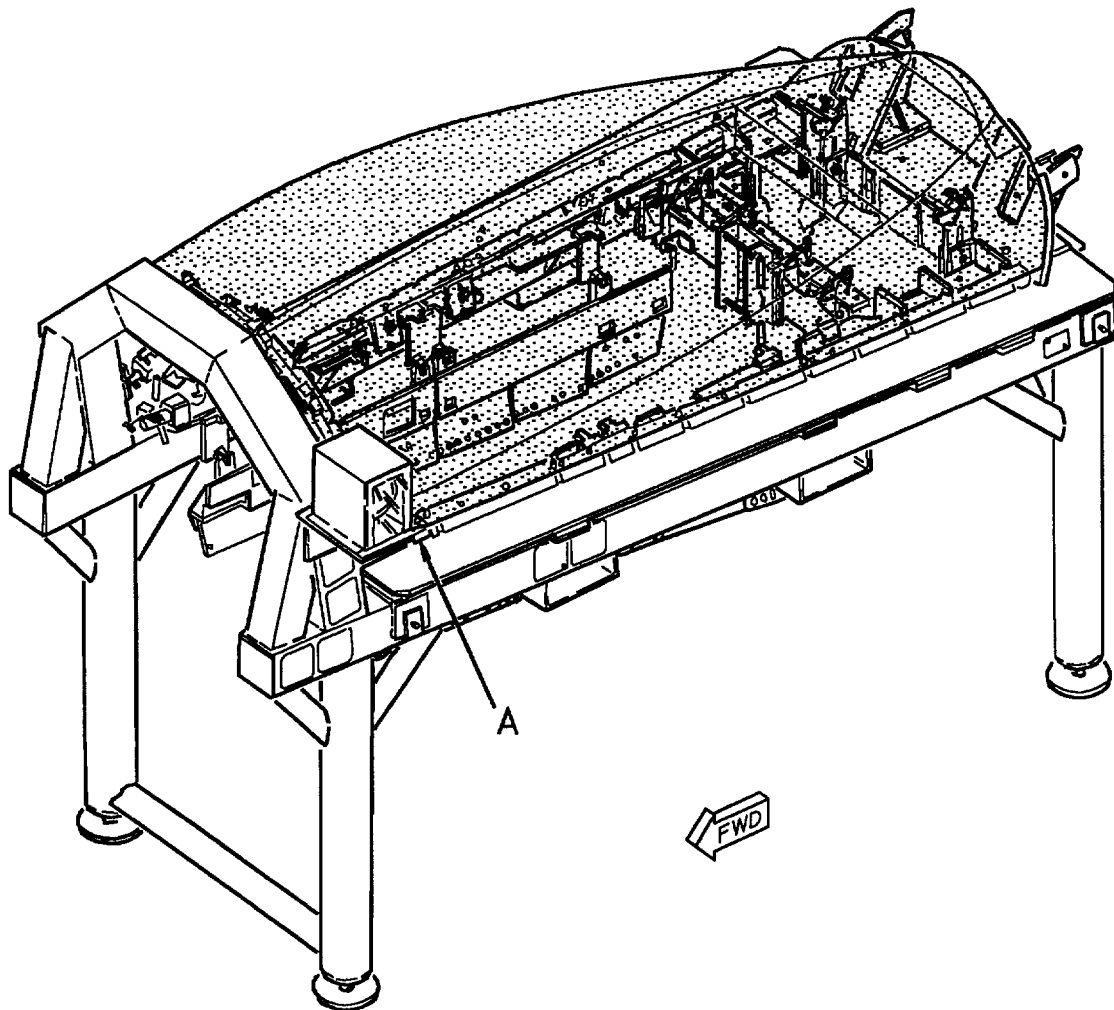


Figure 20. Inspection or Replacement - Side Seal Retainer (Sheet 1)

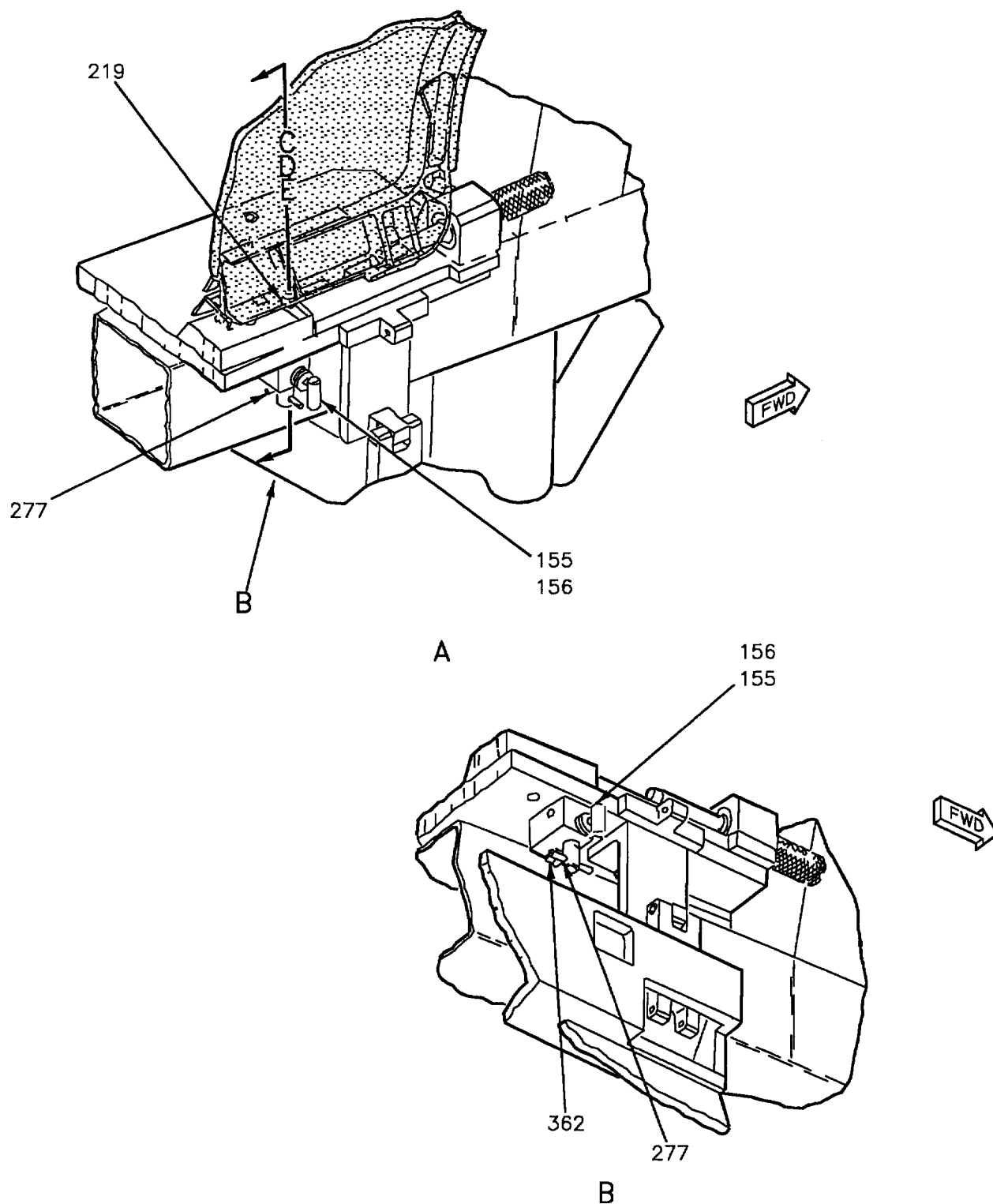


Figure 20. Inspection or Replacement - Side Seal Retainer (Sheet 2)

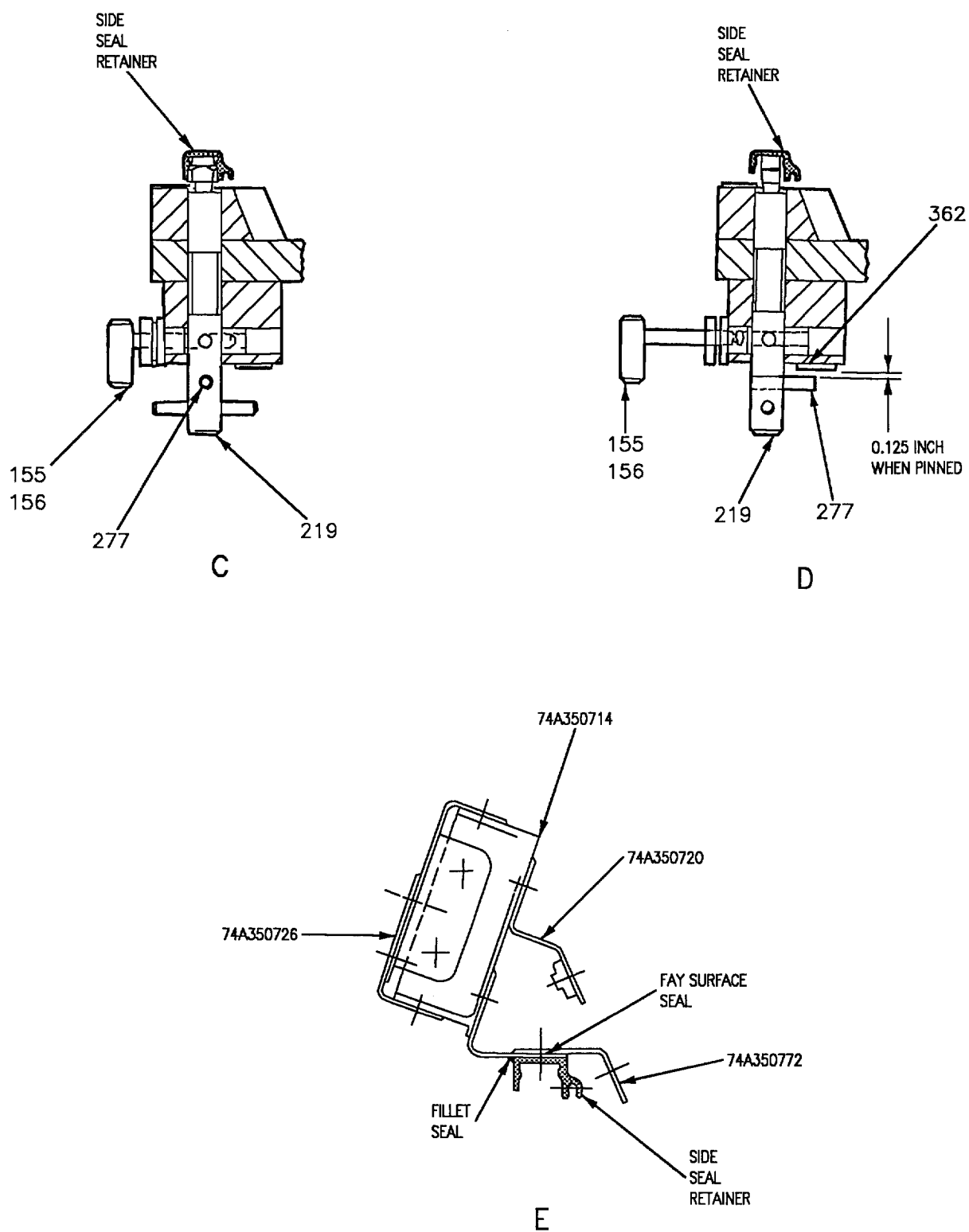


Figure 20. Inspection or Replacement - Side Seal Retainer (Sheet 3)

DETAIL NO.	NAME	FUNCTION
155	L-pin	Retains locator pin (detail 219) two places.
156	L-pin	Retains locator pin (detail 219) six places.
219	Locator pin	Locates side seal retainer 74A350712.
277	Dowel pin	Measuring surface to check gap between dowel pin (detail 277) and pad detail (362).
362	Pad	Measuring surface to check gap between pad (detail 362) and dowel pin (detail 277).

Figure 20. Inspection or Replacement - Side Seal Retainer (Sheet 4)

24. HINGE, 74A350737, AND PIVOT STOP, 74A350774, INSPECTION AND REPLACEMENT. See figure 21.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, Canopy	RE174350004-1
Repair Kit, Canopy	RE274350004-1

Materials Required

Nomenclature	Specification or Part Number
Cheesecloth	CCC-C-440, Type 1, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1797, Type 1
Methyl Ethyl Ketone	TT-M-261
Sealing Compound	MIL-S- 83430, Class A-1/2

25. INSPECTION.



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

- a. Make sure canopy is loaded correctly and secure (WP005 01).
- b. Rotate locator pin (detail 219) in 74A350712 side seal retainer, detail A and B.
- c. Raise locator pin (detail 219) to locating position and insert L-pin (detail 155) two places and L-pin (detail 156) six places, detail B.
- d. Rotate locator pin (detail 165) in 74A350713 aft seal retainer, detail D.
- e. Raise locator pin (detail 165) to locating position and insert L-pin (detail 156) four places, detail E.

f. Engage arch locator (detail 285) by removing L-pins (detail 117) and sliding T-pins (detail 110) forward; reinstall L-pins (detail 117), typical nine places, detail G.

g. Slide canopy forward until net with arch locator (detail 285) and install locator pin (detail 178).

h. If canopy will not slide forward or locator pin (detail 219 or 165) will not rotate in seal retainer, do substeps below:

(1) Rotate locator pin (detail 219 and 165) to clearance fit position, details C and F.

(2) Slide canopy forward until net with arch locator (detail 285) and install locator pin (detail 383).

i. Position locator (detail 335, 338) between hinge and secure to support (detail 19, 55) by installing L-pin (detail 340), detail J.

j. Attach locator (detail 133) to drill template (detail 346) with dowel pin (detail 163) and flat head screws, detail J.

k. Install drill template (detail 346) with locator (detail 133) aligned with slot in hinge; engage dowel pin (detail 163) through pivot stop locator (detail 336), locator (detail 335, 338) and into support (detail 19, 55), detail J.

l. Insert pin (detail 343) through drill template (detail 346), locator (detail 133), spacer (detail 164), and support (detail 19, 55); secure by installing washer (detail 344) and nut (detail 345), detail K.

m. Check for 0.125 inch nominal dimension between hinge and inner surface of drill template (detail 346), detail K.

n. Install step pin (detail 275) in support (detail 19, 55) and check for 0.125 inch nominal dimension between small diameter on step pin and forward surface of hinge, details L and M.

o. Inspect pivot stop to make sure pivot stop locator (detail 336) rests inside cutout in pivot stop and forward end of locator touches end of cutout in pivot stop, detail P.

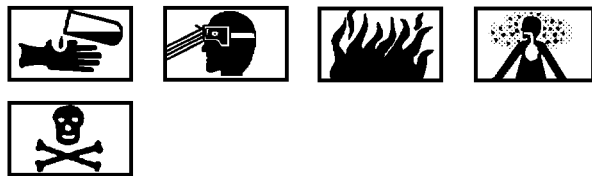
p. Replace hinge and pivot stop if damaged or nominal dimensions are exceeded.

26. REPLACEMENT.

- a. Remove 74A350721 side fairing.

b. Remove fasteners attaching hinge to mating structure. See figure 22 for fastener location.

c. Remove damaged hinge.



Methyl Ethyl Ketone

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d. Clean all residual sealant from mating structure using plastic scraper and cheesecloth moistened with methyl ethyl ketone.

e. Locate new hinge and pivot stop:

(1) Position locator (detail 335, 338) on support (detail 19, 55) by installing L-pin (detail 340), detail H.

(2) Attach locator (detail 133) to drill template (detail 346) with dowel pin (detail 163) and flat head screws, detail H.

(3) Position new hinge and pivot stop next to locator (detail 335, 338).

(4) Install drill template (detail 346) with locator (detail 133) aligned with slot in hinge; engage dowel pin (detail 163) through pivot stop locator (detail 336), locator (detail 335, 338) and into support (detail 19, 55), detail M.

(5) Insert pin (detail 343) through drill template (detail 346), locator (detail 133), spacer (detail 164), and support (detail 19, 55); install washer (detail 344) and nut (detail 345), detail J.

(6) Inspect pivot stop by looking through sight hole in drill template (detail 346); make sure pivot stop locator (detail 336) rests inside cutout in pivot stop and forward end of locator touches end of cutout in pivot stop, detail N.

(7) Install step pin (detail 275) in support (detail 19, 55) so full size shank of pin is next to hinge arm, detail P.

(8) Locate hinge in Y plane location by sliding hinge arm forward on locator (detail 133) until hinge arm contacts step pin (detail 275), detail P.

(9) Install 0.125 inch shim between outboard surface of hinge and inner surface of drill template (detail 346), detail J.

(10) Tighten nut (detail 345).

(11) Tighten thumbscrew (detail 341) securing pivot stop against hinge, detail J.

NOTE

74A350747 shims are installed only when needed to maintain proper fit between 74A350714 side frame and hinge.

(12) Install 74A350747 peel ply shims as required between 74A350714 side frame and hinge, detail R.

f. Locate and drill holes in hinge from 74A350714 side frame and 74A350769 intercostal. See figure 22 for fastener location and hole diameters.



Sealing Compound

7

g. Fay surface seal between hinge and mating structure (A1-F18AC-SRM-200, WP011 00).

h. Wet install permanent fasteners attaching hinge to 74A350769 intercostal, see figure 22 and (A1-F18AC-SRM-200, WP011 00).

i. Install bolts, washers and nuts, typical ten places each side, see figure 22.

j. At hole location 213 through 220:

(1) Insert traveler bushing (detail 52) in drill template (detail 346), detail M.

(2) Drill four 0.191 +0.006 -0.000 inch diameter holes through hinge and pivot stop. See figure 22 for drilling information.

k. Fay surface seal between hinge and pivot stop (A1-F18AC-SRM-200, WP011 00).

l. Wet install permanent fasteners attaching pivot stop to hinge, see figure 22 and (A1-F18AC-SRM-200, WP011 00).

m. Install bolt, washer, spacer, and nut attaching pivot stop hinge, see figure 22.

n. Apply finish system (A1-F18AC-SRM-500, WP021 00).

o. Install 74A350721 side fairing.

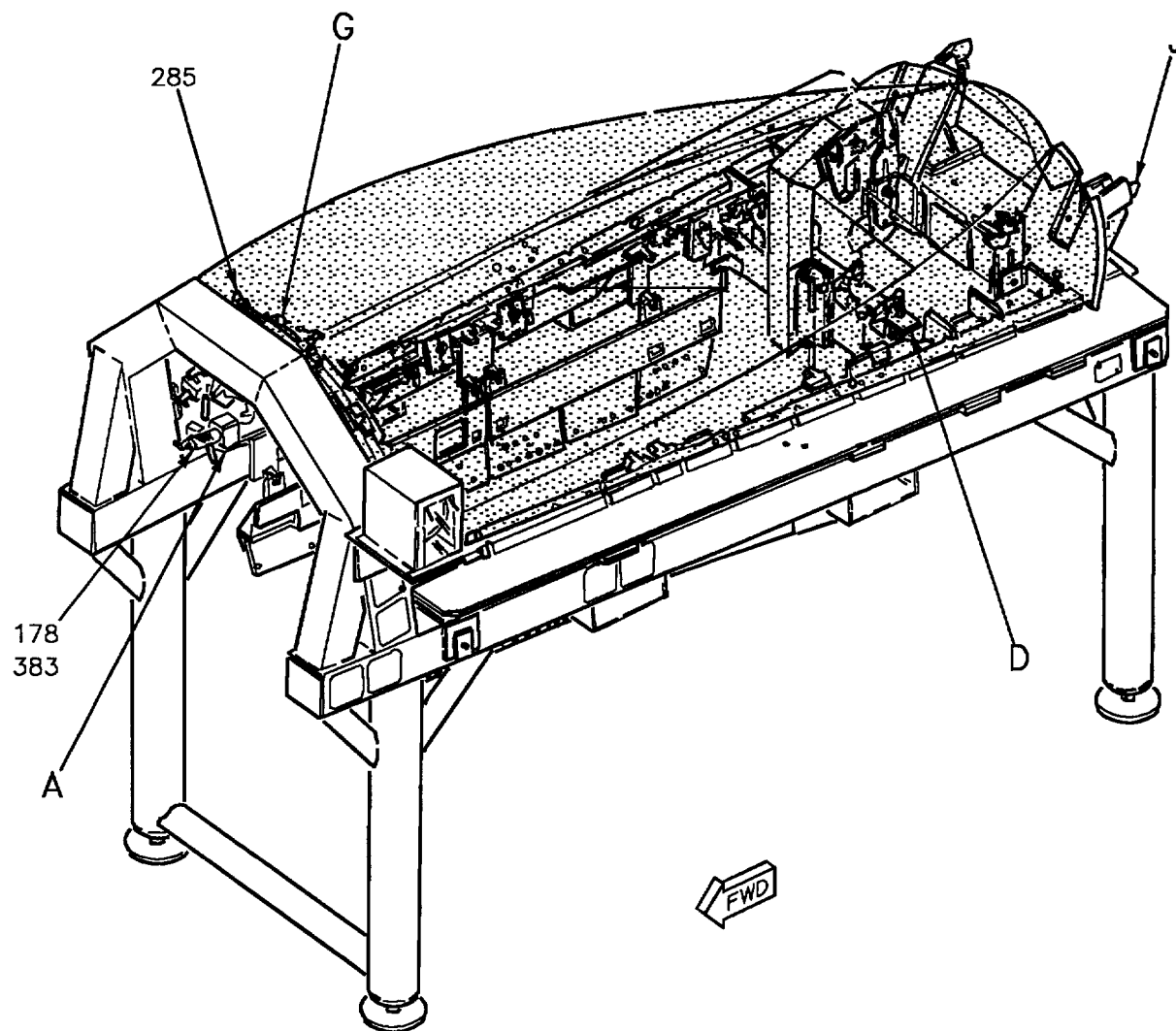


Figure 21. Inspection or Replacement - Hinge and Pivot Stop (Sheet 1)

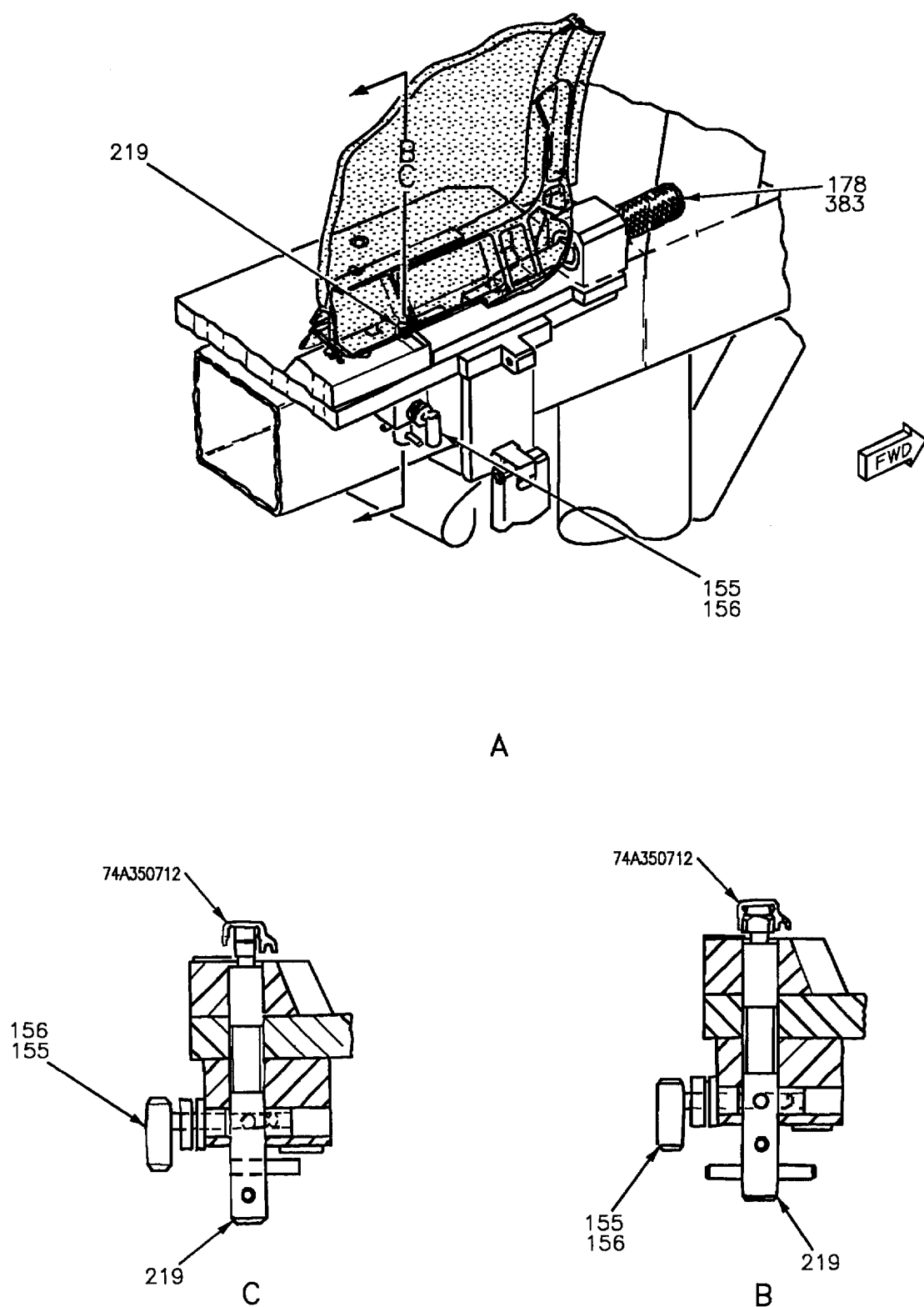


Figure 21. Inspection or Replacement - Hinge and Pivot Stop (Sheet 2)

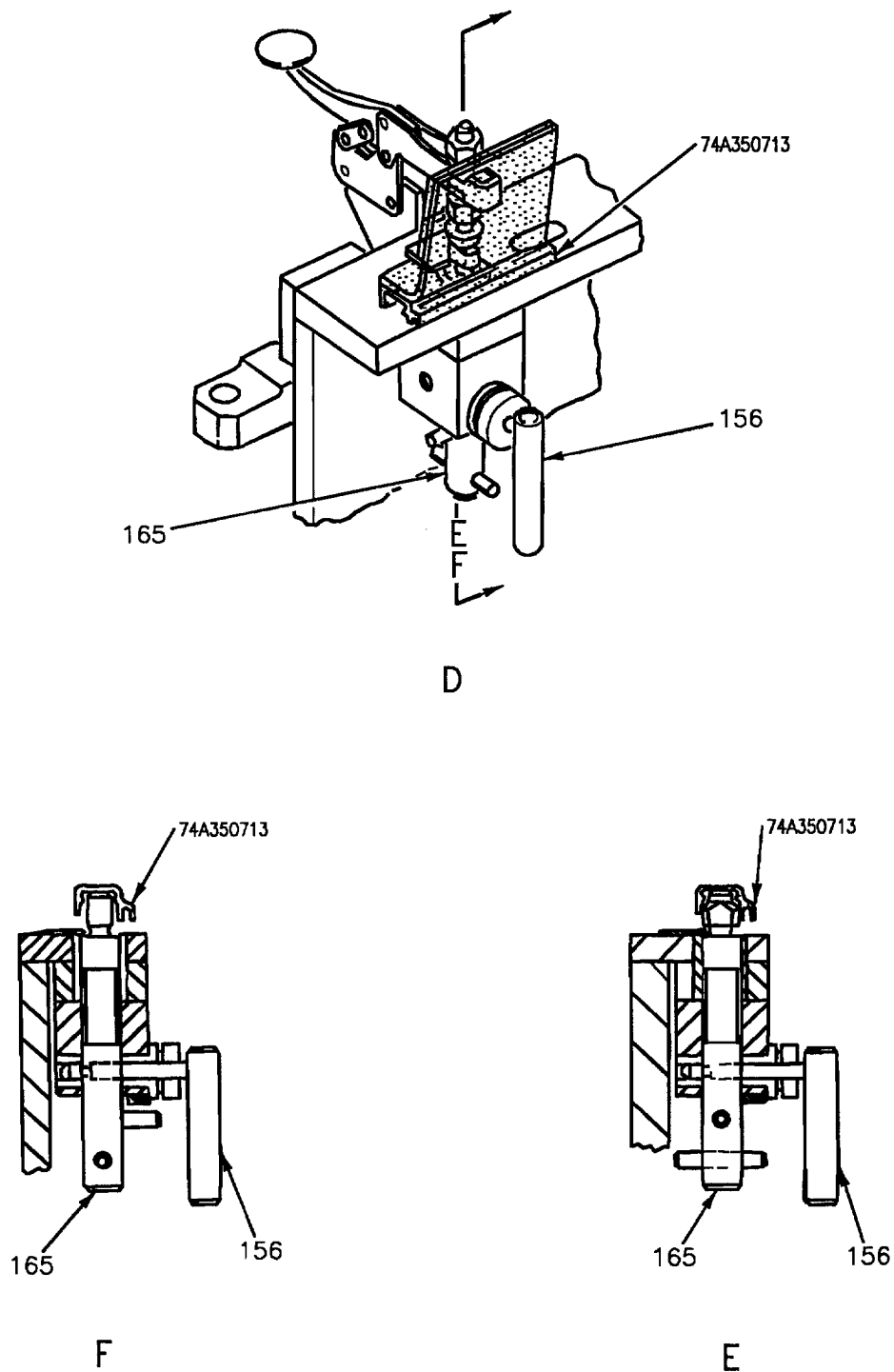


Figure 21. Inspection or Replacement - Hinge and Pivot Stop (Sheet 3)

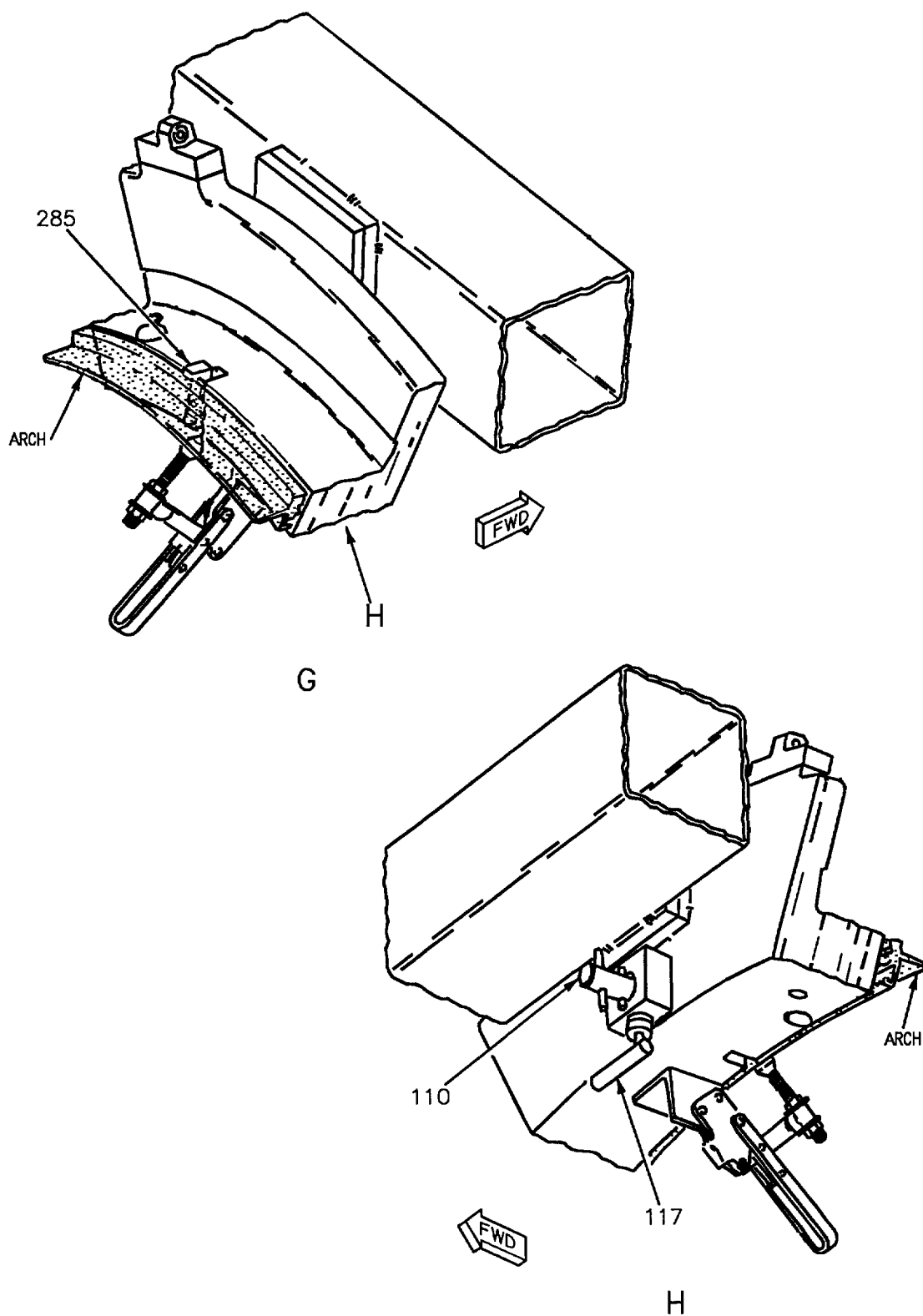


Figure 21. Inspection or Replacement - Hinge and Pivot Stop (Sheet 4)

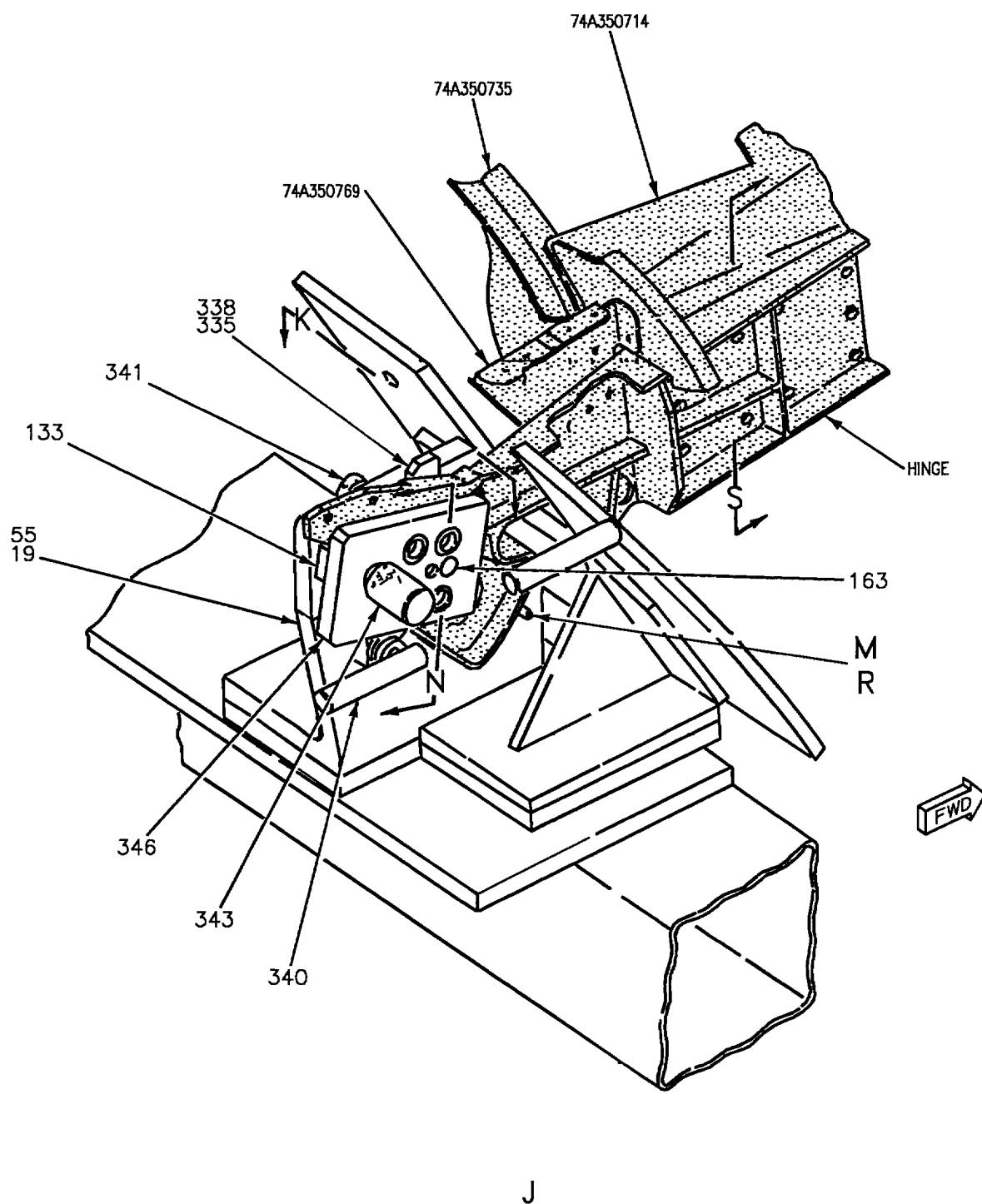
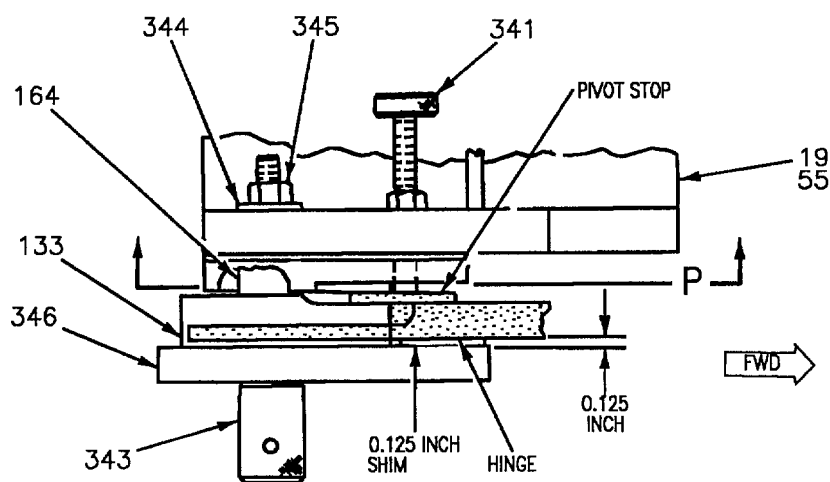
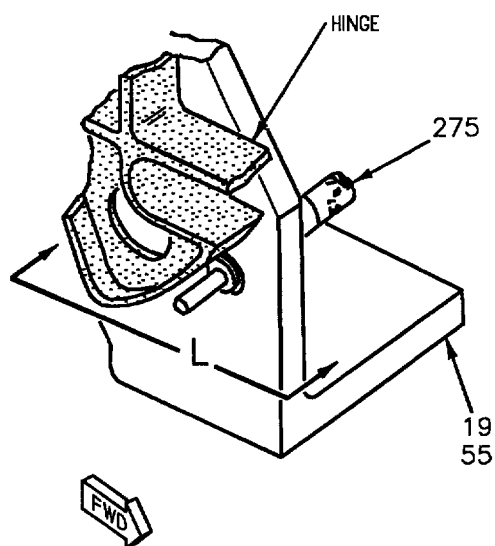


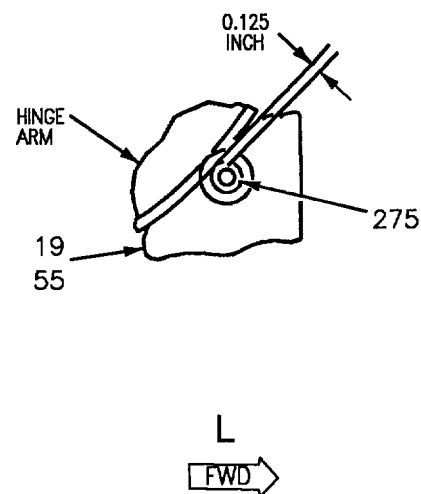
Figure 21. Inspection or Replacement - Hinge and Pivot Stop (Sheet 5)



K

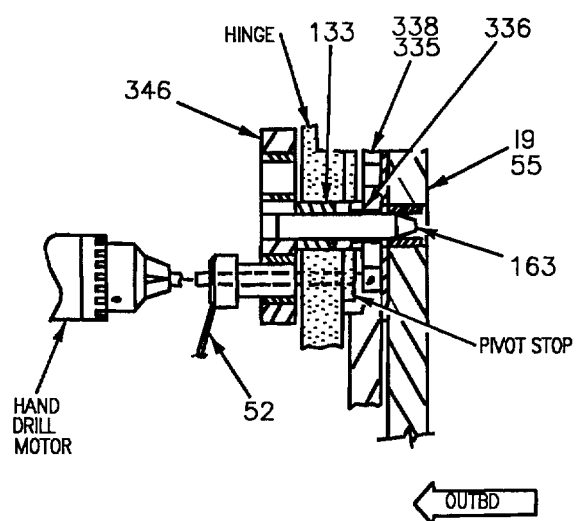


M

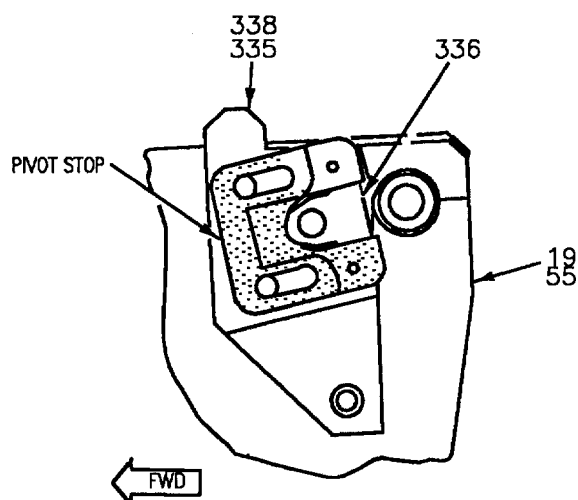


L

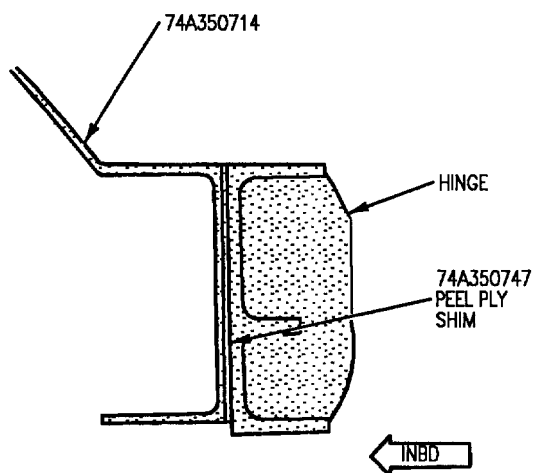
Figure 21. Inspection or Replacement - Hinge and Pivot Stop (Sheet 6)



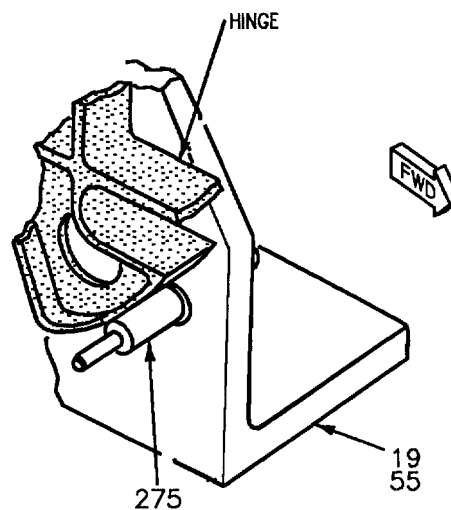
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P



S

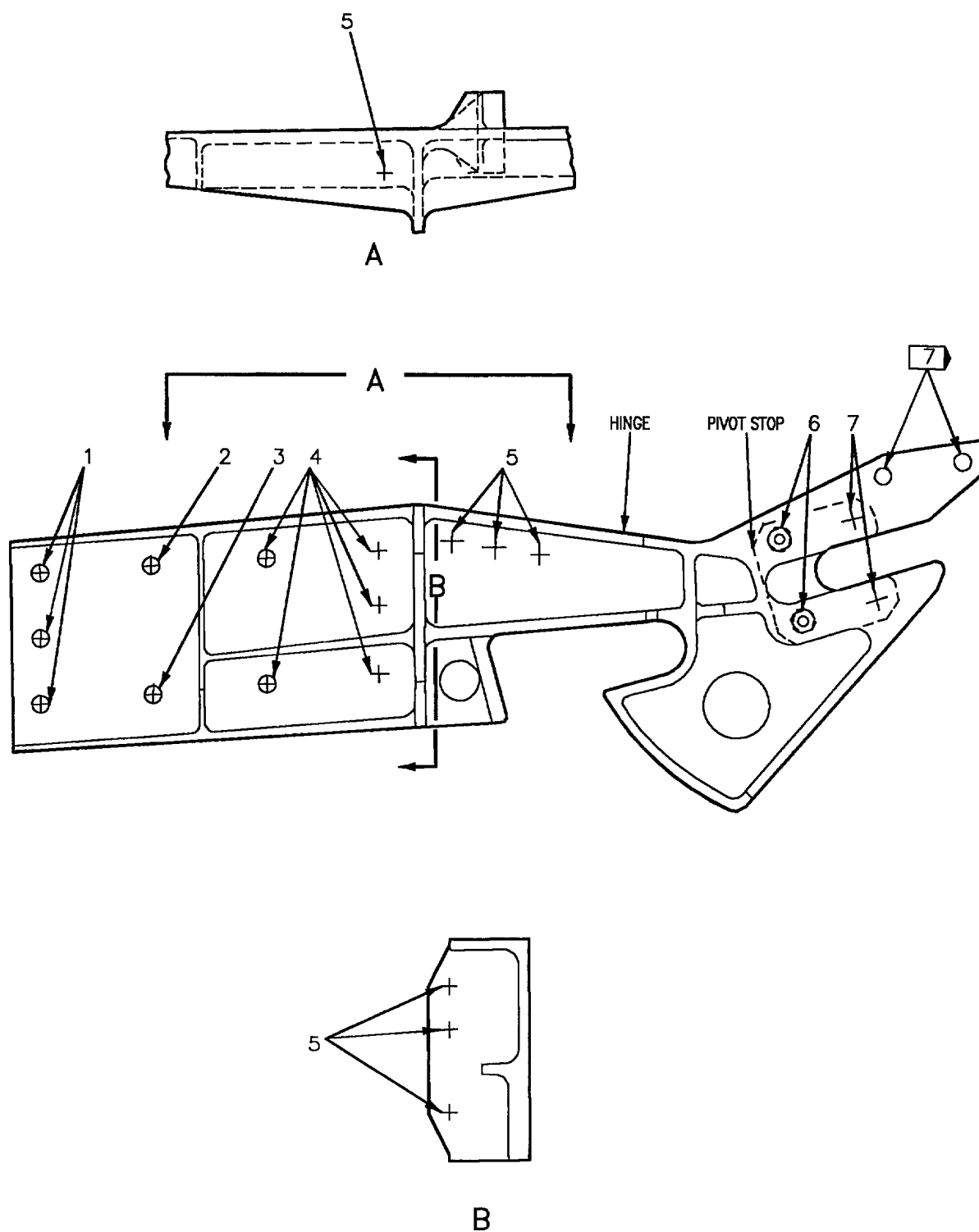


R

Figure 21. Inspection or Replacement - Hinge and Pivot Stop (Sheet 7)

DETAIL NO.	NAME	FUNCTION
19	Support	Provides attachment points for hinge locators, L/H side.
52	Traveler bushing	Guides 0.191 inch diameter drill.
55	Support	Provides attachment points for hinge locators, R/H side.
110	T-pin	Supports and moves arch locator (detail 285).
117	L-pin	Retains T-pin (detail 110) and arch locator (detail 285).
133	Locator	Aligns drill template (detail 346) with slot in hinge.
155	L-pin	Retains locator pin (detail 219) two places.
156	L-pin	Retains locator pin (detail 219) six places.
163	Dowel pin	Aligns drill template to support (detail 19, 55).
164	Spacer	Maintains proper space between locator (detail 133) and locator (detail 335, 338).
165	Locator pin	Locates 74A350713 aft seal retainer.
178	Locator pin	Supports canopy in position at 74A350711 corner frame.
219	Locator pin	Locates 74A350712 side seal retainer.
275	Step pin	Provides 0.125 inch setback and net reference for inspecting or locating hinge.
285	Arch locator	Locates canopy arch in correct position.
335	Locator	Locates left pivot stop.
336	Pivot stop locator	Locates pivot stops with locator (detail 335, 338).
338	Locator	Locates right pivot stop.
340	L-pin	Secures locator (detail 335, 338) to support (detail 19, 55).
341	Thumbscrew	Secures pivot stop against hinge.
343	Pin	Secures drill template (detail 346) and hinge to support (detail 19, 55).
344	Washer	Use with pin (detail 343).
345	Nut	Use with pin (detail 343).
346	Drill template	Locates attach holes in hinge for pivot stop.
383	Locator pin	Supports canopy in position at 74A350711 corner frame when locator pin (detail 219 and 165) are in the clearance fit position.

Figure 21. Inspection or Replacement - Hinge and Pivot Stop (Sheet 8)



05022201

Figure 22. Hinge, 74A350737, and Pivot Stop, 74A350774, Fastener Index (Sheet 1)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE		FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1		6	0.250 +0.006 -0.000		NAS674V5	AN960C416L 4		NAS1291C4M
2		1	0.250 +0.006 -0.000		NAS674V8 2 NAS674V5 3	AN960C416L 4		K50188-4 10695B4RET NAS1291C4M
3		1	0.250 +0.006 -0.000		NAS674V8 2 NAS674V5 3	AN960C416L 4 AN960C416L 4		NAS1291C4M NAS1291C4M
4		10	0.250 +0.006 -0.000		NAS674V7	AN960C416L 5 AN960C416L 6		NAS1291C4M
5		14	0.161 +0.005 -0.000		MS20470AD5			
6	213 thru 216	4	0.191 +0.006 -0.000		NAS673V12	AN960C10L 5 AN960C10 6	NAS43DD3-6	NAS1291C3M
7	217 thru 220	4	0.191 +0.006 -0.000		MS20470AD6			
<p style="text-align: center;">LEGEND</p> <p>1 For oversize repair fasteners, see (A1-F18AC-SRM-200, WP004 07).</p> <p>2 Left side.</p> <p>3 Right side.</p> <p>4 Two required.</p> <p>5 Install under bolt head.</p> <p>6 Install under nut.</p> <p>7 Hole diameter is 0.191 +0.006 -0.000.</p>								

Figure 22. Hinge, 74A350737, and Pivot Stop, 74A350774, Fastener Index (Sheet 2)

27. **AFT BEAM, 74A350735, INSPECTION AND REPLACEMENT.** See figure 23.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, Canopy	RE174350004-1
Repair Kit, Canopy	RE27435004-1

Materials Required

Nomenclature	Specification or Part Number
Cheesecloth	CCC-C-440, Type 1, Class 1
Methyl Ethyl Ketone	TT-M-261
Sealing Compound	MIL-S-83430, Class A-1/2

28. **INSPECTION.**



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

- Make sure canopy is loaded correctly and secure (WP005 01).
- Raise locator (detail 127) into locating position and secure by installing L-pin (detail 112), detail A.
- Check for 0.125 inch nominal gap between locator (detail 127) and aft surface of aft beam, detail B.
- Check for 0.125 inch nominal gap between locator (detail 127) and lower surface of aft beam, detail B.
- Replace aft beam if damaged or nominal gap is exceeded.

29. **REPLACEMENT.**

- Remove 74A350721 side fairing.
- Remove transparency (WP005 03).
- Remove fasteners attaching damaging aft beam to mating structure.
- Remove damaged aft beam.



Methyl Ethyl Ketone

5

e. Clean all residual sealing compound from mating structure using plastic scraper and cheesecloth moistened with methyl ethyl ketone.

f. Locate new aft beam:

(1) Install 0.125 inch shim between locator (detail 127) and lower surface of aft beam, detail B.

(2) Install 0.125 inch shim between locator (detail 127) and aft surface of aft beam, detail B.

(3) Position aft beam in correct X plane location by setting left side of centerline flange on aft beam net with 74A350770 intercostal.

(4) Engage toggle clamp (detail 54) two places, detail A.

NOTE

74A350747 shims are installed only when needed to maintain proper fit between aft beam and 74A350714 side frame.

(5) Install 74A350747 peel ply shims as required, see details C and D.

g. Locate and drill fastener holes in aft beam using existing holes in mating structure. See figure 24 for fastener location and hole diameter.



Sealing Compound

7

h. Fay surface seal between aft beam and 74A350714 side frame (A1-F18AC-SRM-200, WP011 00).

i. Wet install fasteners, see figure 24 and (A1-F18AC-SRM-200, WP011 00).

j. Apply finish system (A1-F18AC-SRM-500, WP021 00).

k. Install transparency (WP005 03).

l. Install 74A350721 side fairing.

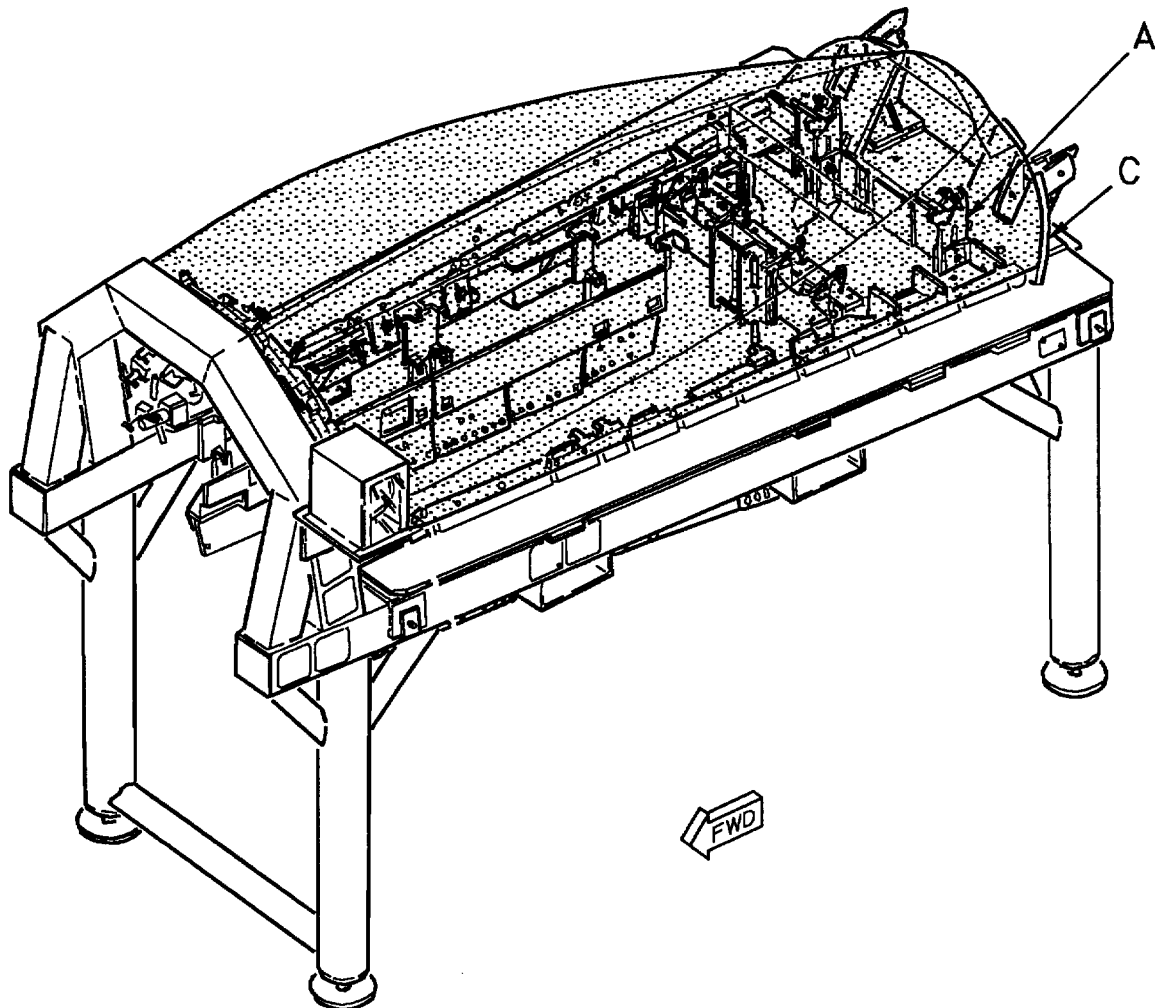


Figure 23. Inspection or Replacement - Aft Beam (Sheet 1)

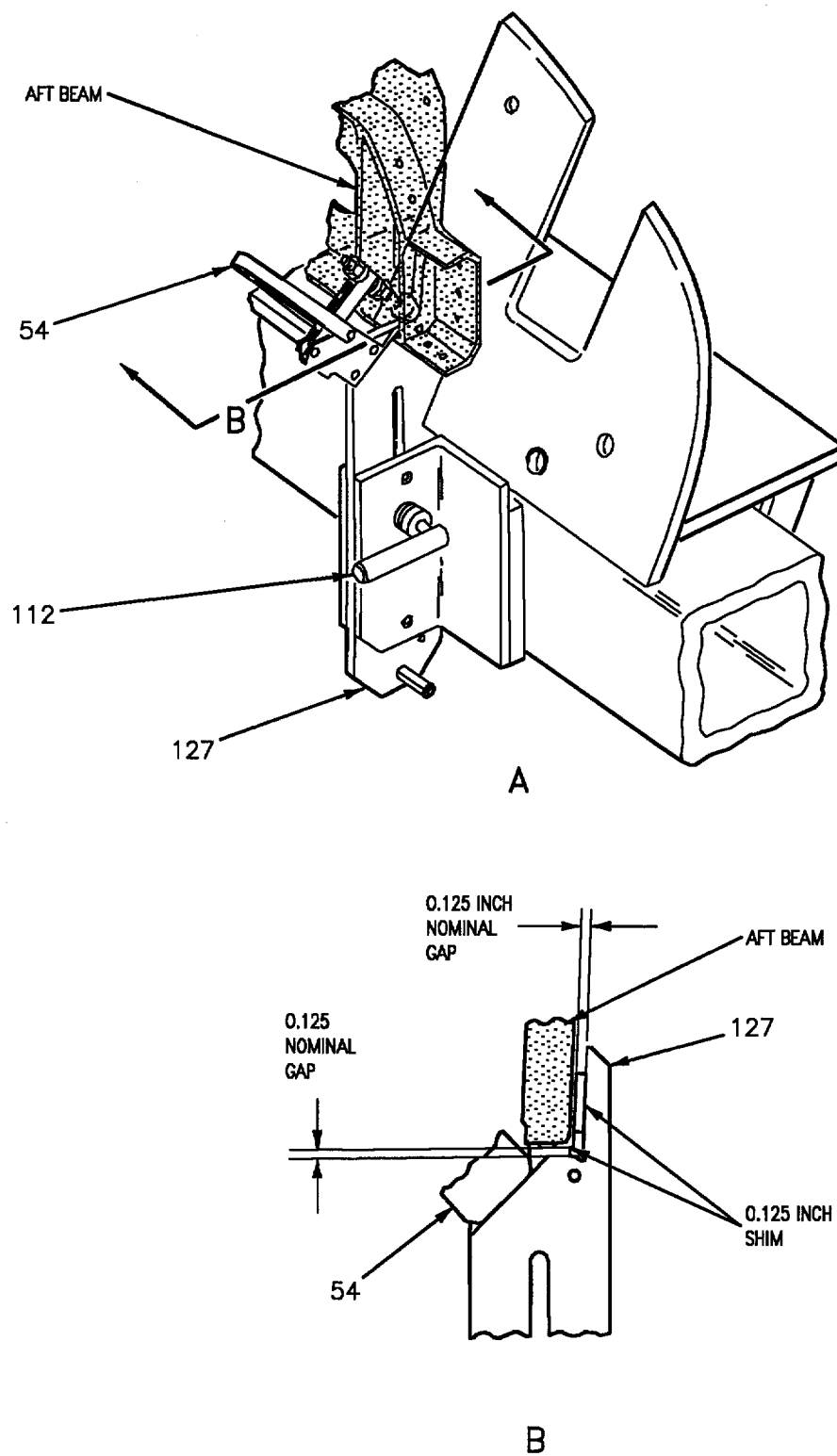
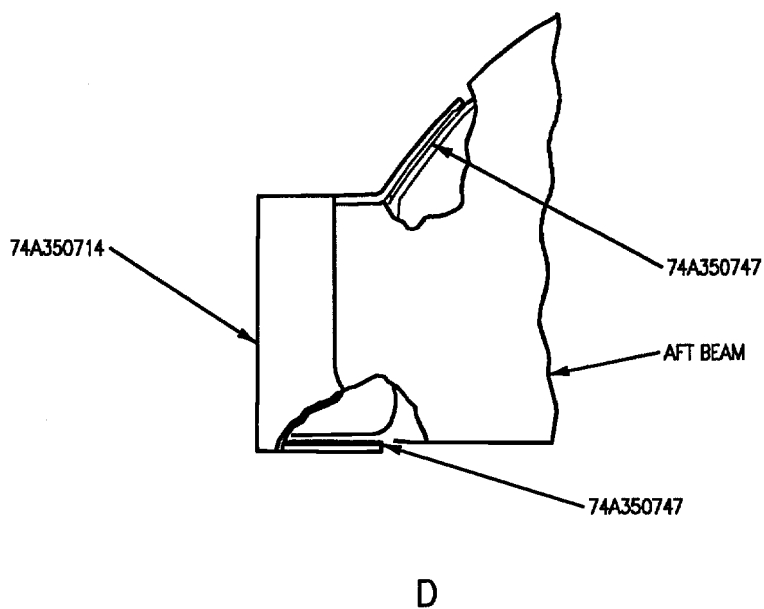
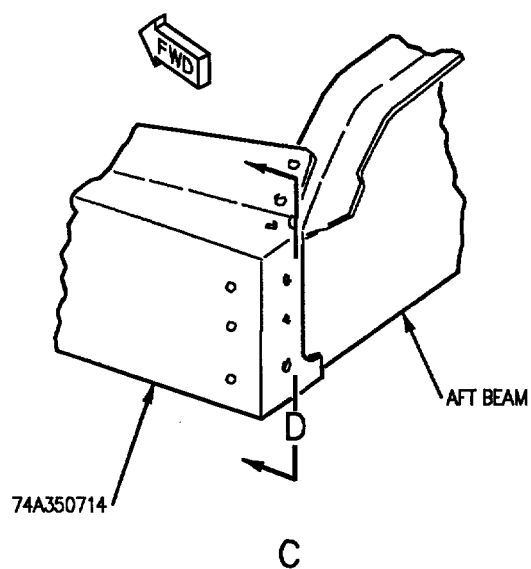


Figure 23. Inspection or Replacement - Aft Beam (Sheet 2)



05022303

DETAIL NO.	NAME	FUNCTION
54	Toggle clamp	Secures aft beam to locator
112	L-pin	Secures locator (detail 127) in locating position.
127	Locator	Locates and supports aft beam.

Figure 23. Inspection or Replacement - Aft Beam (Sheet 3)

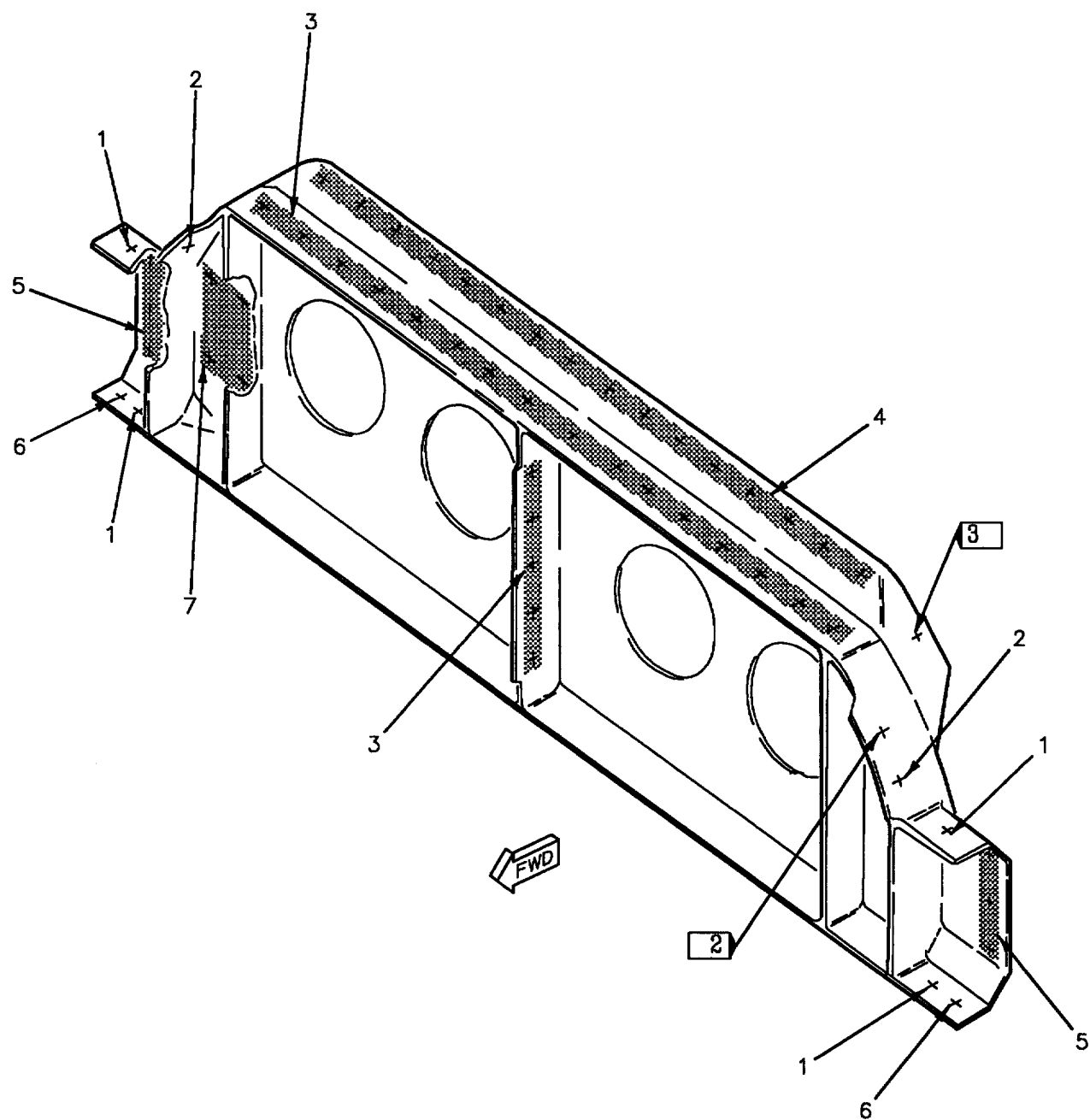


Figure 24. Aft Beam, 74A350735, Fastener Index (Sheet 1)





INDEX NO.	HOLE NO.	QTY	HOLE SIZE		FASTENER 	WASHER	SPACER BUSHING	RETAINER
1		4	0.191 +0.006 -0.000		HLT310TA6-5			SW1000-6M
2		2	0.191 +0.006 -0.000		HLT310TA6-7			SW1000-6M
3		21	0.191 +0.006 -0.000		CSR903B-6-7			
4		16	0.159 +0.007 -0.000		MS20470AD5			
5		6	0.191 +0.006 -0.000		HLT310TA6-4			SW1000-6M
6		2	0.191 +0.006 -0.000		HLT310TA6-6			SW1000-6M
7		4	0.191 +0.006 -0.000		HLT312TA6-4			SW1000-6M
<p style="text-align: center;">LEGEND</p> <p> For oversize repair fasteners, see (A1-F18AC-SRM-200, WP004 07).</p> <p> Hole diameter is 0.196 +0.006 -0.000 inch.</p> <p> Hole diameter is 0.196 +0.006 -0.000 inch; counterbore inner surface to 0.625 inch diameter.</p>								

Figure 24. Aft Beam, 74A350735, Fastener Index (Sheet 2)

30. **THRUSTER SUPPORT, 74A350748, INSPECTION AND REPLACEMENT.** See figure 25.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, Canopy	RE174350004-1
Repair Kit, Canopy	RE274350004-1

Materials Required

Nomenclature	Specification or Part Number
Cheesecloth	CCC-C-440, Type 1, Class 1
Methyl Ethyl Ketone	TT-M-261
Sealing Compound	MIL-S-83430, Class A-1/2

31. **INSPECTION.**



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

- a. Make sure canopy is loaded correctly and secure (WP005 01).
- b. Position locator assembly (detail 32) on fixture base (detail 143, 144) by installing L-pin (detail 113, 396), detail A.
- c. Install beam (detail 21) onto locator assembly (detail 32) and secure by inserting L-pin (detail 137) two places, detail B.
- d. Slide locator (detail 190 and 191) aft into slot in thruster support, detail C.
- e. Position locator (detail 190) on beam (detail 21) by inserting L-pin (detail 156) two places and secure with handknob (detail 209), detail C.

f. Inspect for 0.125 inch gap between locator (detail 191) and left hand inboard surface of thruster support, detail D.

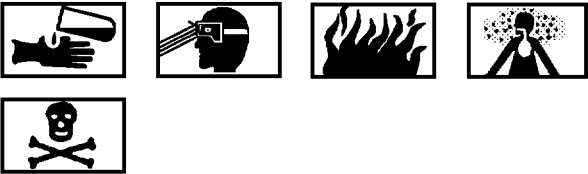
g. Inspect for 0.125 inch gap between locator (detail 190) and left hand inboard surface of clevis, detail D.

h. Inspect for Y plane location by inserting locating pin (detail 192) through locator (detail 190) and clevis of support, detail D.

i. Replace thruster support if damaged or engineering tolerance is exceeded.

32. **REPLACEMENT.**

- a. Remove fasteners attaching thruster support to mating structure. See figure 26 for fastener location.
- b. Remove damaged thruster support.



Methyl Ethyl Ketone 5

- c. Clean all residual sealing compound from mating structure using plastic scraper and cheesecloth moistened with methyl ethyl ketone.
- d. Locate new thruster support:
 - (1) Position locator (detail 190) with spacer (detail 166) on beam (detail 21) by inserting L-pin (detail 156) two places and secure with handknob (detail 209), detail C.
 - (2) Locate in X plane location by placing left hand inboard surface of clevis against locators (detail 190 and 191), detail E.
 - (3) Install locating pin (detail 192) through clevis of thruster support and locator (detail 190), detail E.
 - (4) Slide thruster support down until it rests on 74A350744 plate.

(5) Secure thruster support in position by installing knob (detail 221) on locating pin (detail 192) and applying C-clamp on thruster support and locator (detail 190), detail E.

e. Locate and drill holes in thruster support using existing holes in mating structure. See figure 26 for fastener location and hole diameter.

f. Fay surface seal between thruster support and 74A350744 plate (A1-F18AC-SRM-200, WP011 00).

g. Wet install fasteners, see figure 26 and (A1-F18AC-SRM-200, WP011 00).

h. Apply finish system (A1-F18AC-SRM-500, WP021 00).



Sealing Compound

7

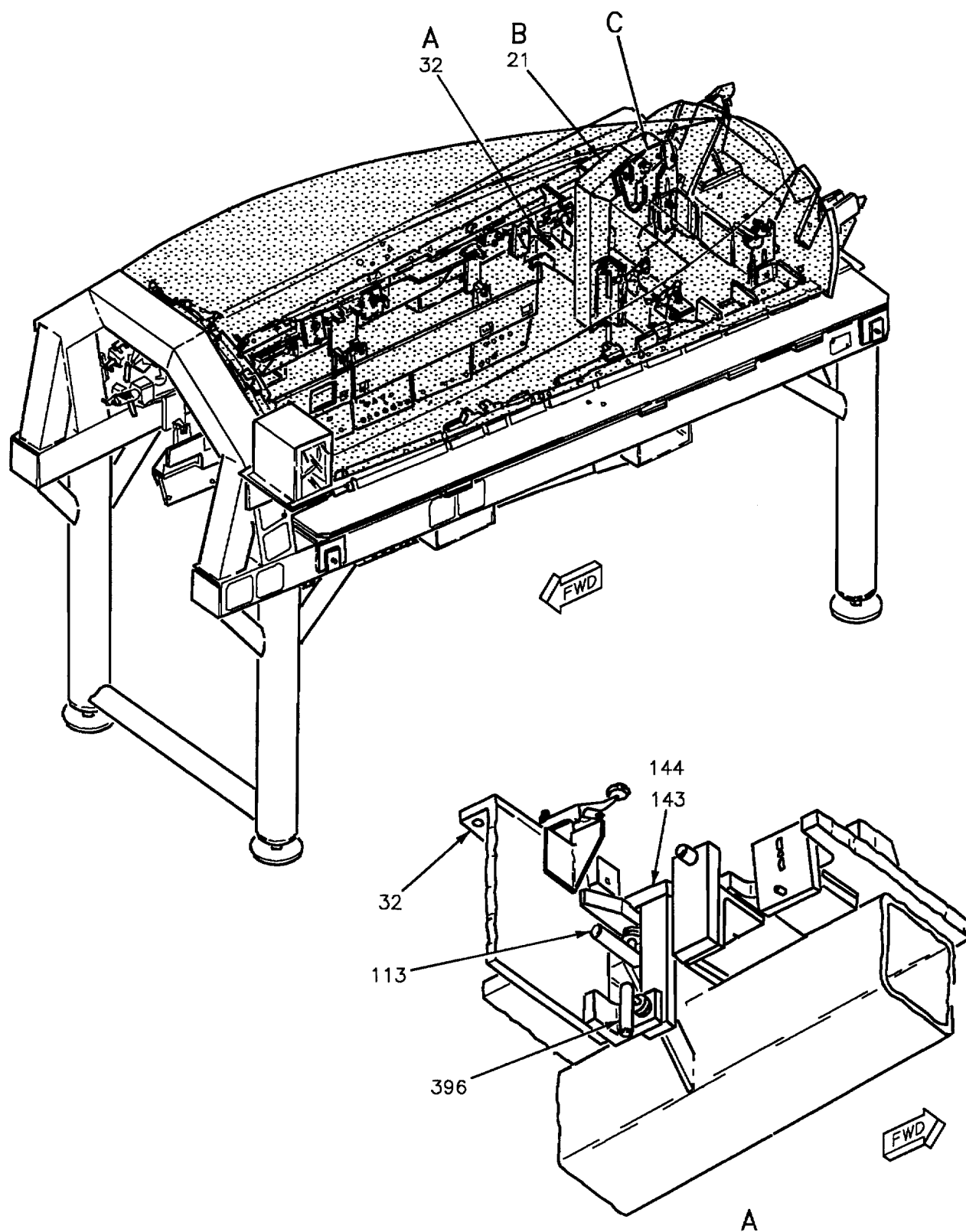


Figure 25. Inspection or Replacement - Thruster Support (Sheet 1)

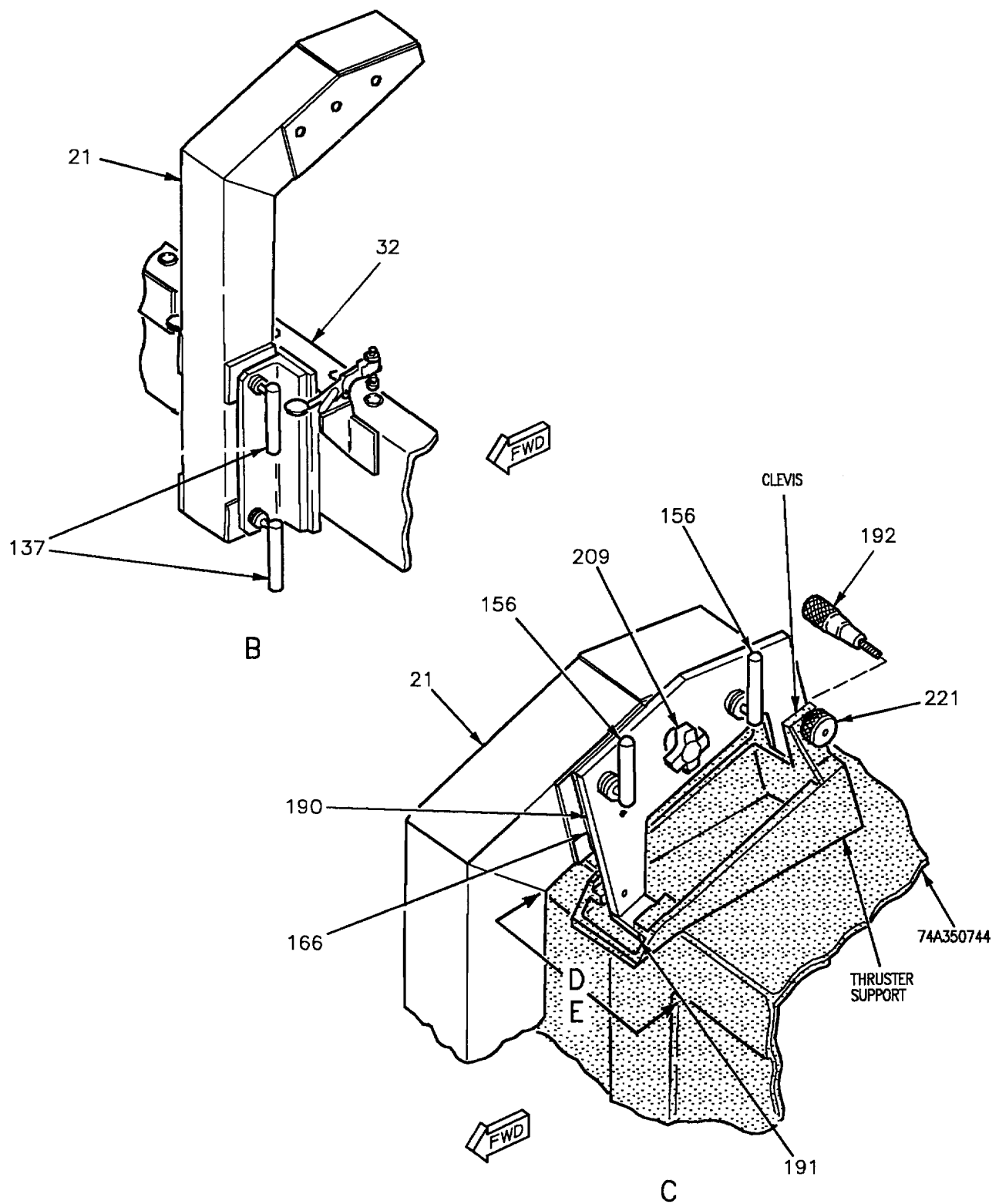


Figure 25. Inspection or Replacement - Thruster Support (Sheet 2)

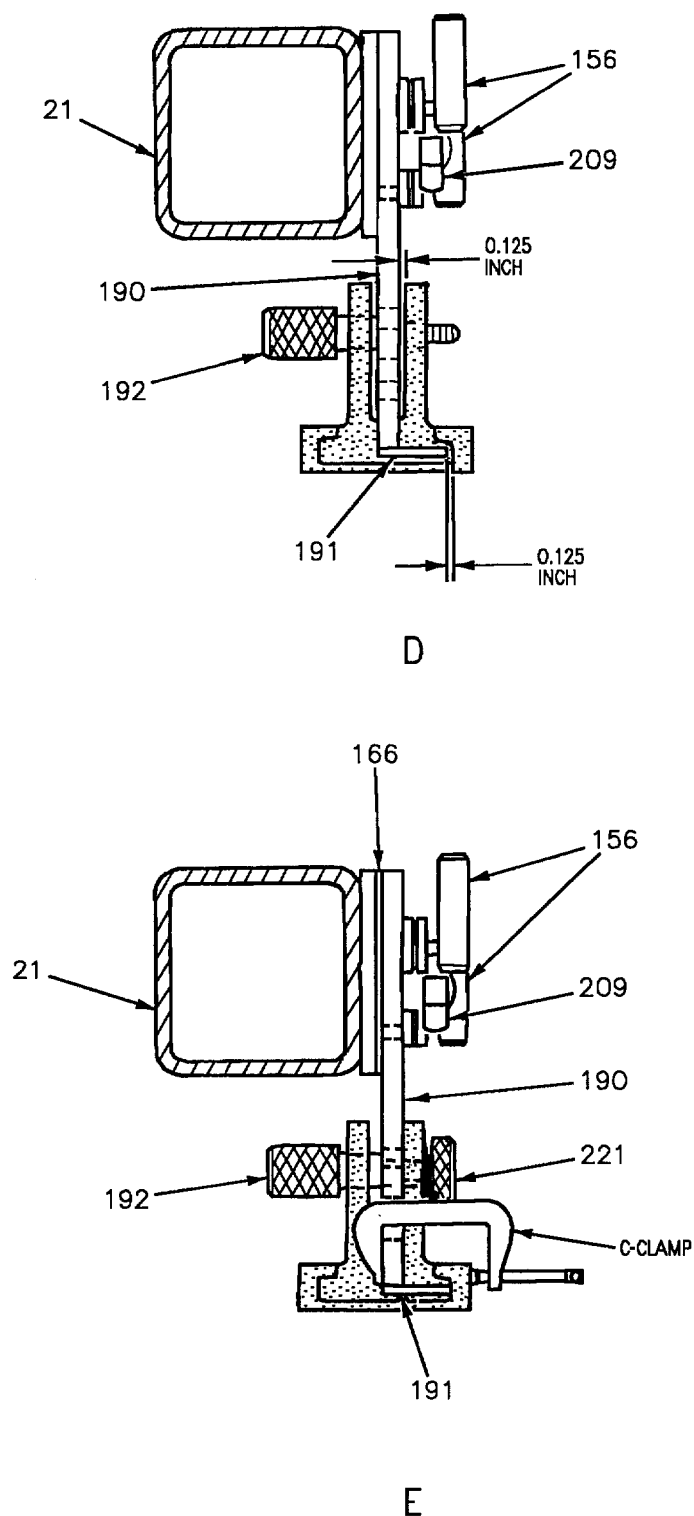


Figure 25. Inspection or Replacement - Thruster Support (Sheet 3)

DETAIL NO.	NAME	FUNCTION
21	Beam	Provides attachment for locator (detail 190).
32	Locator assembly	Locates aft seal retainer 74A350713 and contains attachment points for beam (detail 21).
113	L-pin	Secures locator assembly (detail 32) to fixture base (detail 143, 144).
137	L-pin	Secures beam (detail 21) to locator assembly (detail 32).
143, 144	Fixture base	Base of fixture to which locators mount.
156	L-pin	Locates locator (detail 190) on beam (detail 21).
166	Spacer	Used with locator (detail 190) when locating new thruster support.
190	Locator	Locates thruster support.
191	Locator	Locates thruster support within locator (detail 190).
192	Locating pin	Attaches thruster support to locator (detail 190).
209	Handknob	Secures locator (detail 190) to beam (detail 21).
221	Knob	Used with locating pin (detail 192) to attach thruster support to locator (detail 190).
396	L-pin	Secures locator assembly (detail 32) to fixture base (detail 143, 144).

Figure 25. Inspection or Replacement - Thruster Support (Sheet 4)

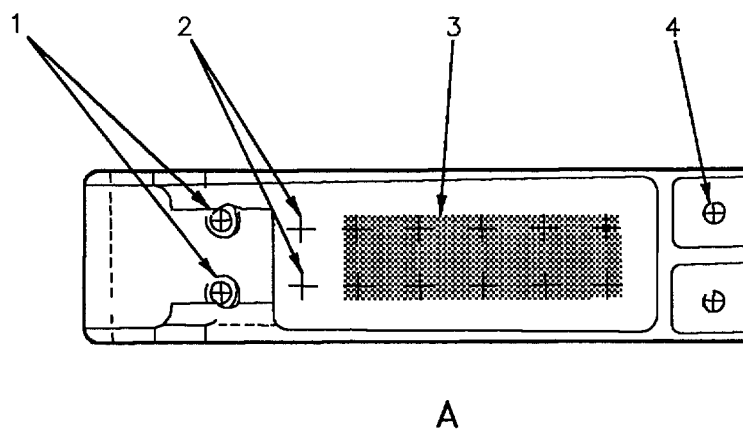
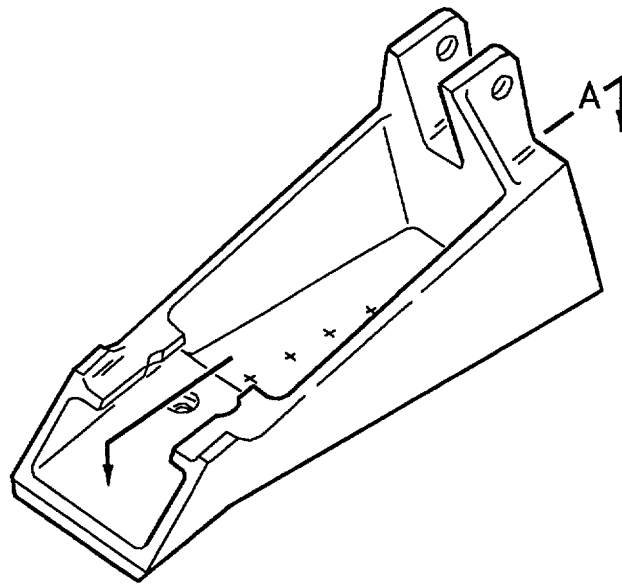


Figure 26. Thruster Support, 74A350748, Fastener Index (Sheet 1)



INDEX NO.	HOLE NO.	QTY	HOLE SIZE		FASTENER 	WASHER	SPACER BUSHING	RETAINER
1		2	0.250 +0.006 -0.000		HLT310TB8-9			SW1000-8M
2		2	0.191 +0.007 -0.000		CSR903B-6-12			
3		10	0.191 +0.007 -0.000		CSR903B-6-9			
4		2	0.250 +0.006 -0.000		HLT310TB8-1C			SW1000-8M
<p style="text-align: center;">LEGEND</p> <p> For oversize repair fasteners, see (A1-F18AC-SRM-200, WP004 07).</p>								

Figure 26. Thruster Support, 74A350748, Fastener Index (Sheet 2)

33. AFT FAIRING, 74A350722, AND AFT BULKHEAD, 74A350745, INSPECTION AND REPLACEMENT. See figure 27.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, Canopy	RE174350004-1
Repair Kit, Canopy	RE274350002-1

Materials Required

Nomenclature	Specification or Part Number
Adhesive	RTV-106
Cheesecloth	CCC-C-440, Type 1, Class 1
Methyl Ethyl Ketone	TT-M-261
Sealing Compound	MIL-S-83430, Class A-1/2

34. INSPECTION.



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

- a. Make sure canopy is loaded correctly and secure (WP005 01).
- b. Position canted plate (detail 174) on fixture by inserting L-pin (detail 113) two places and installing handknob (detail 209), detail B.
- c. Slide locator (detail 124, 125, 126) through cut-outs in canted plate (detail 174) and secure by installing L-pin (detail 156), detail B.
- d. Inspect for 0.125 inch gap between locator (detail 124, 125, 126) and flanges of aft fairing and aft bulkhead using "GO, NO-GO" gage (detail 56), detail D.

- e. Check mold line contour of aft fairing:

(1) Insert 0.110 inch diameter "GO" side of gage (detail 56) between upper surface of canted plate (detail 174, 405, 406) and inner surface of aft fairing to check that minimum allowable gap has not been exceeded, detail C.

(2) Try to insert 0.155 inch diameter "NO-GO" side of gage (detail 56) between upper surface of canted plate (detail 174, 405, 406) and inner surface of aft fairing to check that maximum allowable gap has not been exceeded, detail C.

f. Position trim plate (detail 280) on canted plate (detail 174, 405, 406) by inserting L-pin (detail 113) two places and secure by installing handknob (detail 209) four places, detail E.

- g. Check aft trim of aft fairing:

(1) Insert 0.220 inch diameter "GO" gage (detail 200) between trim plate (detail 280) and aft edge of aft fairing to check that minimum allowable trim line gap has not been exceeded, detail F.

(2) Try to insert 0.280 inch diameter "NO-GO" gage (detail 201) between trim plate (detail 280) and aft edge of aft fairing to check that maximum allowable trim line gap has not been exceeded, detail F.

h. Replace aft fairing or aft bulkhead if damaged or engineering tolerance is exceeded.

35. REPLACEMENT.

- a. Remove transparency (WP005 03).
- b. Remove fasteners attaching aft fairing to mating structure. See figure 28 for fastener location.
- c. Remove fasteners attaching aft bulkhead to mating structure. See figure 28 for fastener location.
- d. Remove damaged aft fairing and/or aft bulkhead.



Methyl Ethyl Ketone

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- e. Clean all residual sealant from mating structure with a plastic scraper and cheesecloth moistened with methyl ethyl ketone.

f. Position canted plate (detail 174) on fixture by inserting L-pin (detail 113) two places and installing handknob (detail 209), detail B.

g. Slide locator (detail 124, 125, 126) through cutouts in canted plate (detail 174) and secure by installing L-pin (detail 156), detail B.

h. Locate new aft fairing and/or aft bulkhead:

(1) Position forward flange of aft fairing into notches at end of locator (detail 124, 125, 126), detail J.

(2) Insert 0.125 inch shim between locator (detail 124, 125, 126) and inner surface of aft fairing, detail J.

(3) Insert 0.125 inch shim between canted plate (detail 174, 405, 406) and aft inner edge of aft fairing, detail H.

(4) Position aft bulkhead flange on top of forward flange of aft fairing and insert 0.125 inch shim between locator (detail 124) and inner surface of aft bulkhead, detail J.

(5) Position lower surface of aft bulkhead net with upper surface of 74A350735 aft beam.

i. Position drill blanket (detail 38) onto fixture by inserting L-pin (detail 113) six places and secure by installing handknob (detail 209) two places, detail G.

j. Insert 0.125 inch shim between upper surface of aft fairing and bottom surface of drill blanket (detail 38), detail H and J.

k. Position left edge of 74A350722 aft fairing in line with locator (detail 282, 353); view through slots cut in drill blanket (detail 38), detail K and L.

l. Retract L-pin (detail 156) six places on upper surface of drill blanket (detail 38), detail K and L.

m. Position 74A350722 aft fairing doublers under 74A350722 aft fairing, detail K and L.

n. Insert L-pin (detail 156) six places on upper surface of drill blanket (detail 38), detail K and L.

o. Locate 74A350722 aft fairing doublers net with L-pin (detail 156) six places, detail K and L.

p. Insert 0.125 inch shim between upper surface of 74A350722 aft fairing doublers and locator (detail 282, 353), detail M.

q. Visually check for proper location of aft fairing using four 1-inch diameter holes in drill blanket (detail 38), detail G.

r. At hole location 231 through 236:

(1) Insert traveler bushing (detail 64) in drill bushing (detail 38C), detail N.

(2) Drill 0.098 +0.005 -0.000 inch diameter hole. See figure 28 for hole location and drilling information.

(3) Countersink holes in aft bulkhead to flushness requirement of fastener.

s. At hole location 223 through 230 and 237 through 244:

(1) Insert traveler bushing (detail 65) in drill bushing (detail 38C), detail P.

(2) Drill 0.161 +0.005 -0.000 inch diameter hole. See figure 28 for hole location and drilling information.

(3) Countersink holes in aft fairing to flushness requirement of fastener.

t. At hole location 221, 222 and 245, 246:

(1) Insert traveler bushing (detail 35) in drill bushing (detail 38C, 38E), detail R.

(2) Drill 0.196 +0.006 -0.000 inch diameter hole. See figure 28 for hole location and drilling information.

(3) Countersink holes in aft fairing to flushness requirement of fastener.

u. Remove drill blanket (detail 38).

v. At hole location 86 through 104:

(1) Temporarily install transparency with enough fasteners to hold in correct position (WP005 03).

NOTE

If oversize fasteners were used in existing transparency, use traveler bushing (detail 60 and 62) to drill pilot holes in aft bulkhead and aft fairing.

(2) Insert traveler bushing (detail 66) into existing holes of transparency.

(3) Drill 0.1285 inch diameter pilot holes.

(4) Remove transparency (WP005 03).

(5) Open pilot holes to 0.196 +0.006 -0.000 inch diameter nominal size or drill oversize as required to match existing hole in transparency.

w. Locate and drill remaining holes in aft fairing using existing holes in mating structure. See figure 28 for fastener location and hole diameter.

x. Countersink holes (1, 6, figure 28) to flushness requirement of fasteners.

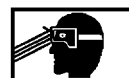
y. Position trim plate (detail 280) on canted plate (detail 174, 405, 406) by inserting L-pin (detail 113) two places and secure by installing handknob (detail 209) four places, detail E.

z. Position scribe (detail 207) on trim plate (detail 280), detail F.

aa. Scribe trim line in new aft fairing by applying enough pressure to make sure scribe remains flat on trim plate.

ab. Remove aft fairing and trim to scribed lines.

ac. Apply finish system (A1-F18AC-SRM-500, WP021 00).



Sealing Compound

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ad. Fay surface seal between aft bulkhead and mating structure (A1-F18AC-SRM-200, WP011 00).

ae. Fay surface seal between aft fairing and mating structure (A1-F18AC-SRM-200, WP011 00).

af. Wet install permanent fasteners, see figure 28 and (A1-F18AC-SRM-200, WP011 00).

ag. Install removable fasteners, see figure 28.



Adhesive

12

ah. Bond 74A350004 silicone rubber strip to aft bulkhead using RTV-106 adhesive.

ai. Install transparency (WP005 03).

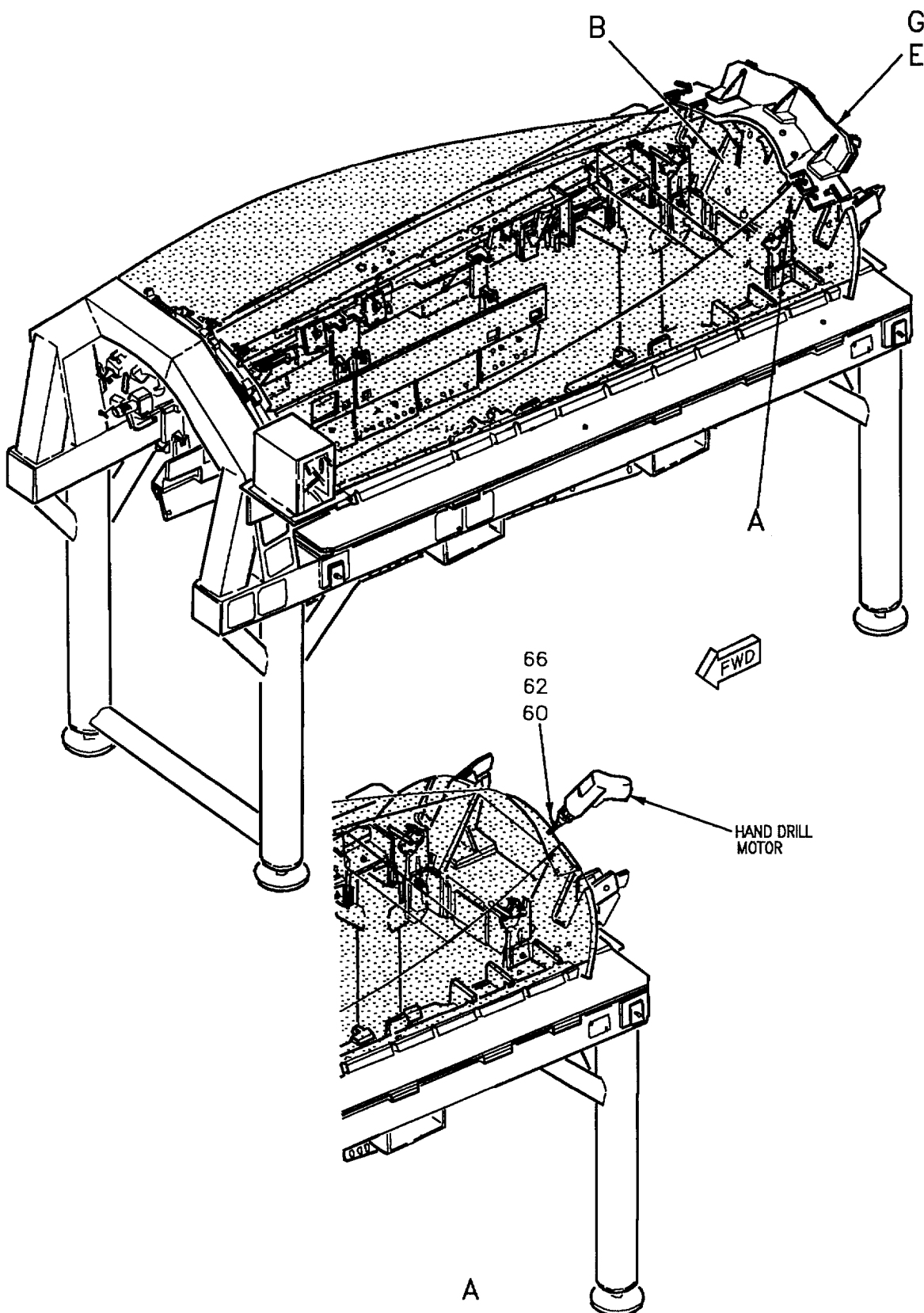
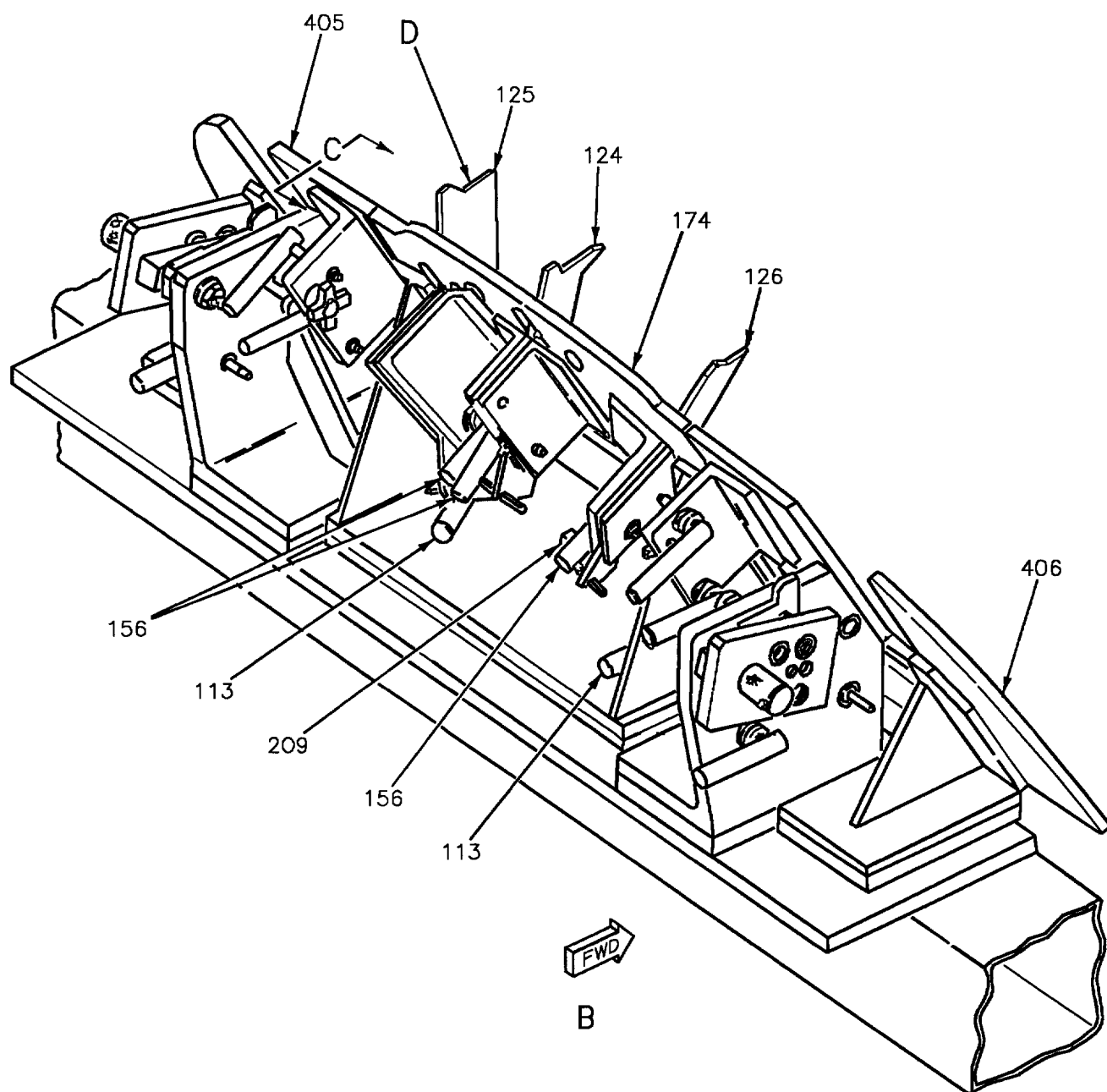


Figure 27. Inspection or Replacement - Aft Fairing and Aft Bulkhead (Sheet 1)

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05022702

Figure 27. Inspection or Replacement - Aft Fairing and Aft Bulkhead (Sheet 2)

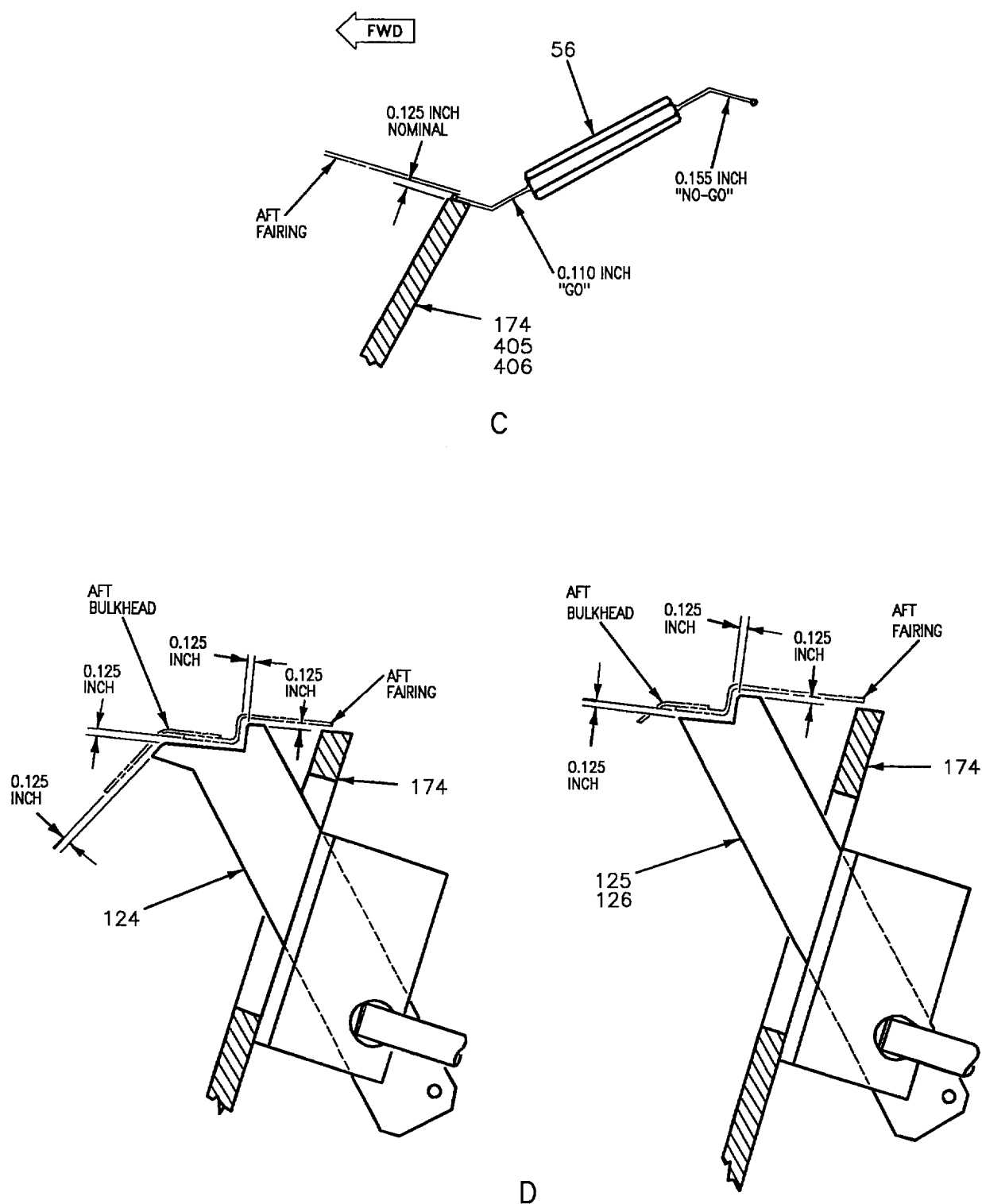
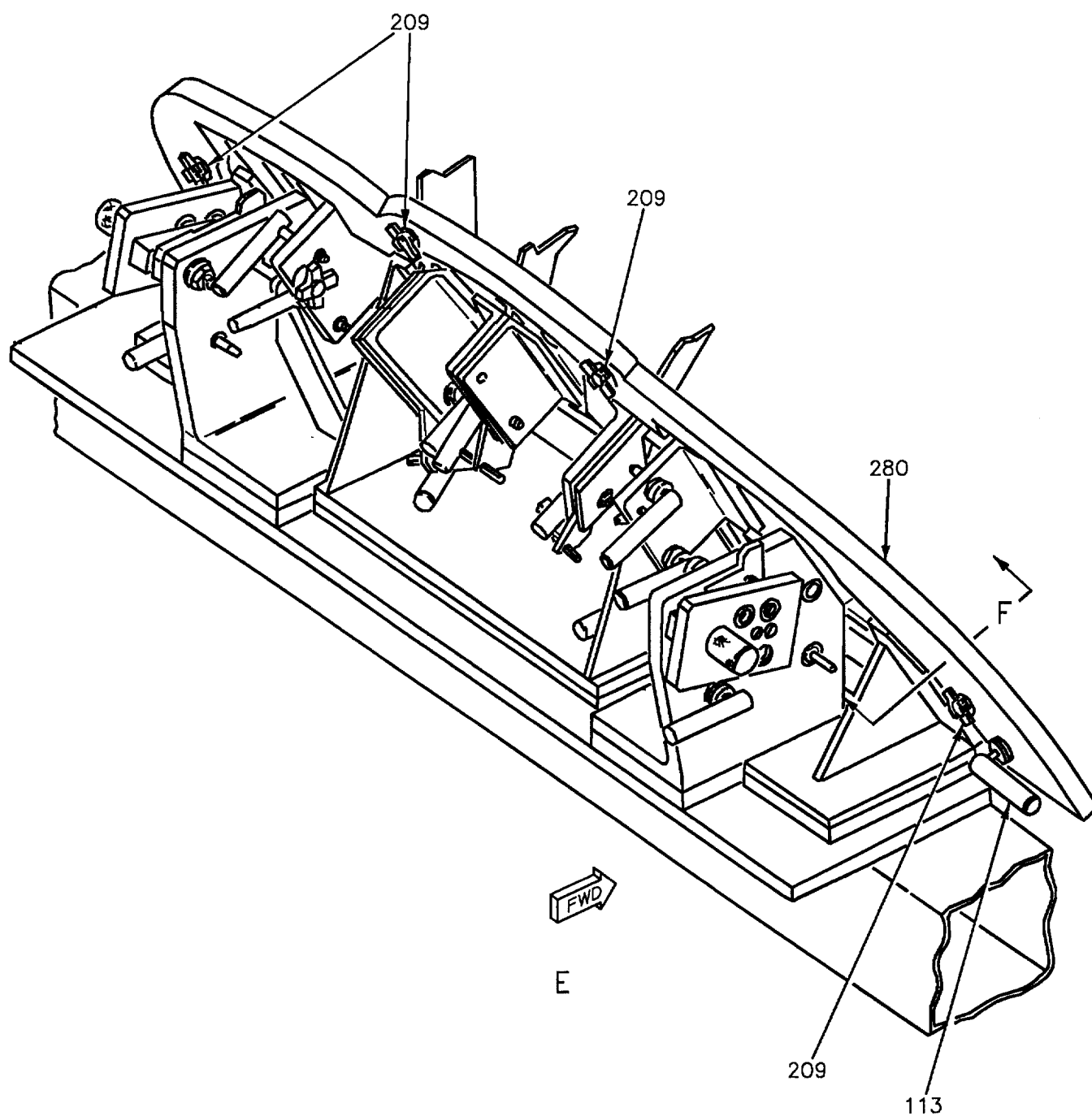
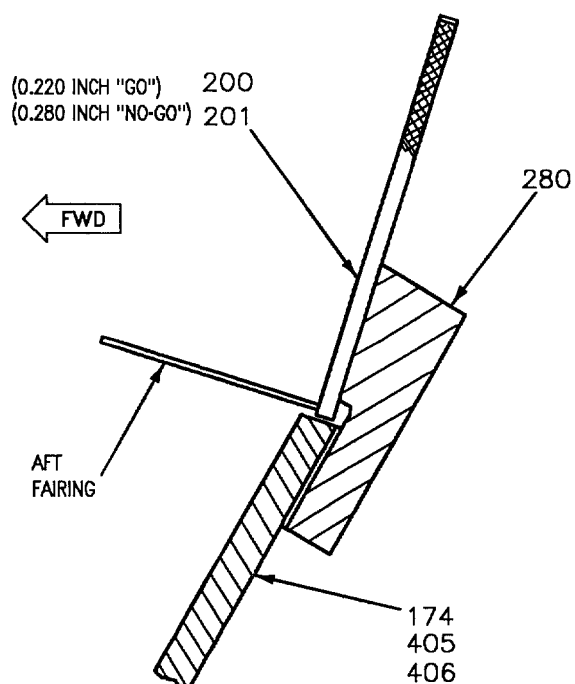


Figure 27. Inspection or Replacement - Aft Fairing and Aft Bulkhead (Sheet 3)

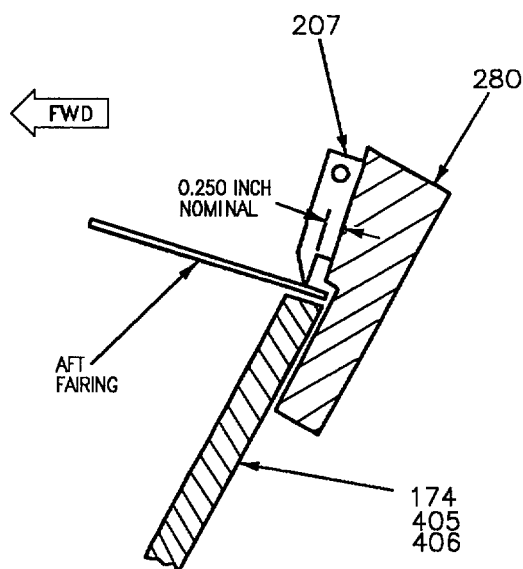


05022704

Figure 27. Inspection or Replacement - Aft Fairing and Aft Bulkhead (Sheet 4)



INSPECTING TRIM LINE GAP ON AFT EDGE OF AFT FAIRING

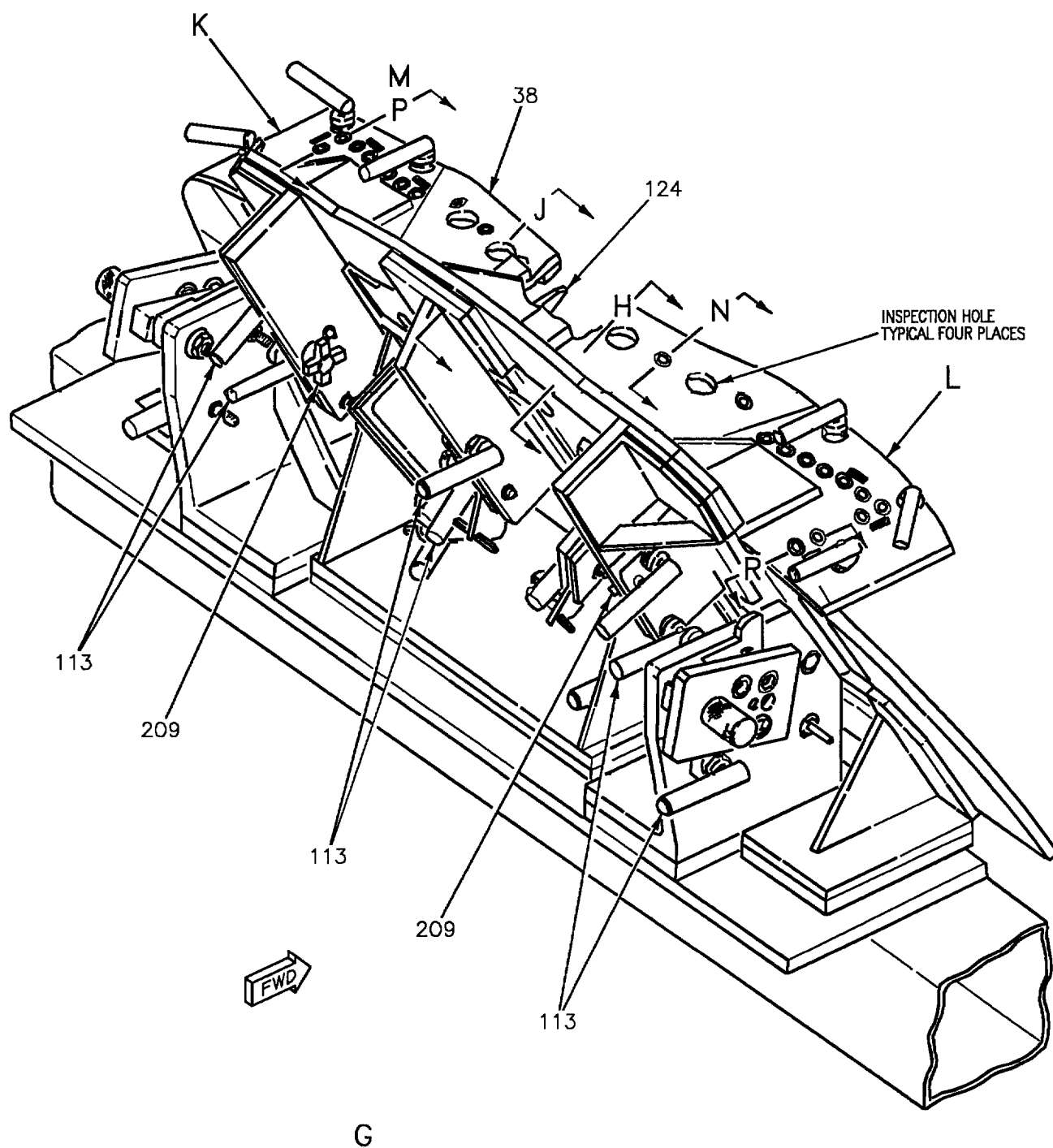


F

SCRIBING TRIM LINE ON AFT EDGE OF AFT FAIRING

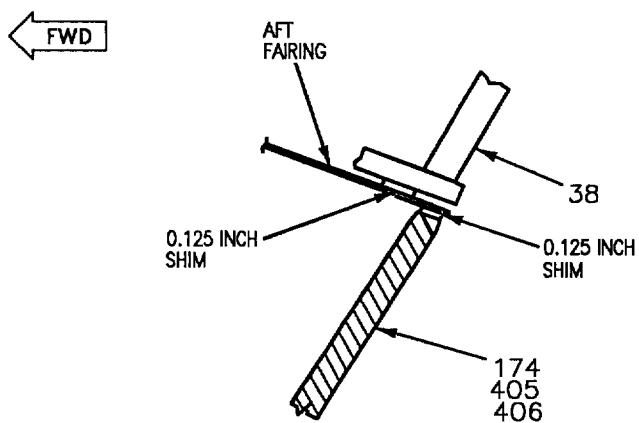
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Figure 27. Inspection or Replacement - Aft Fairing and Aft Bulkhead (Sheet 5)

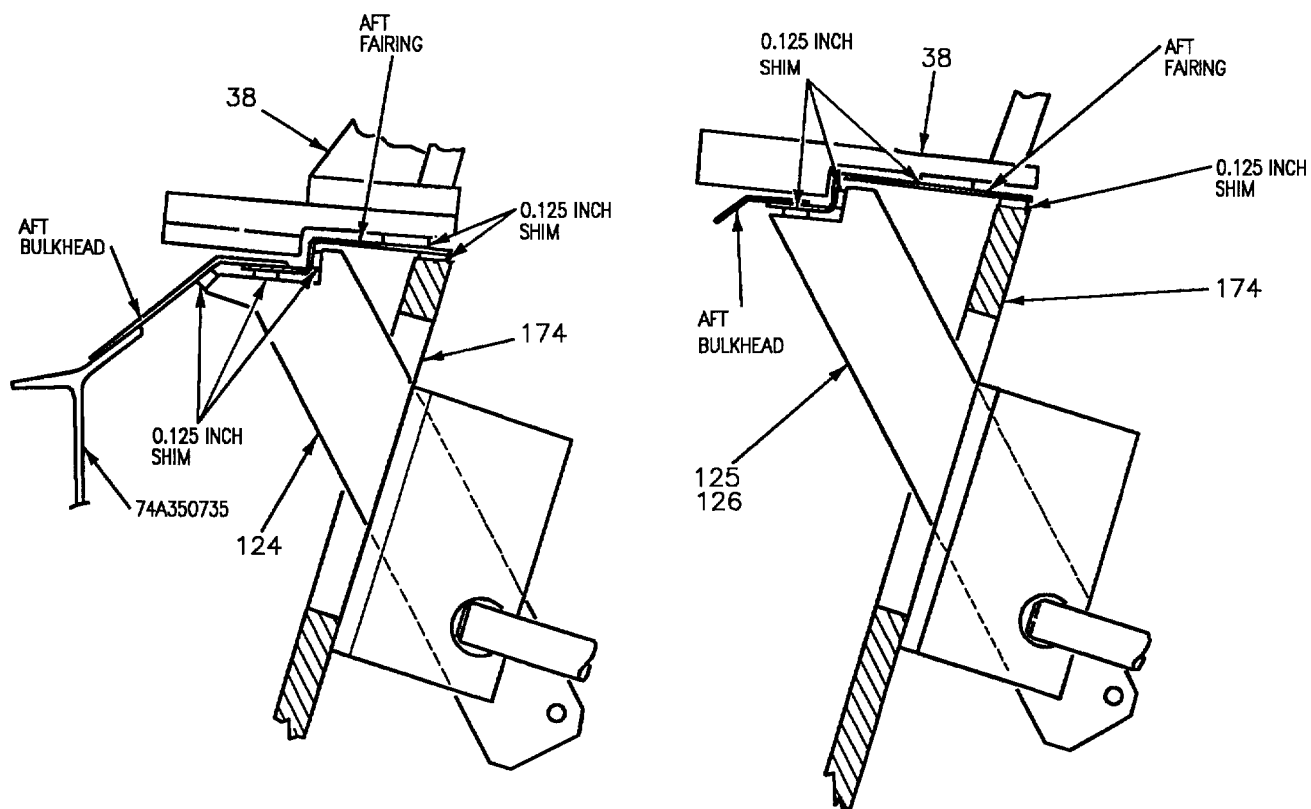


05022706

Figure 27. Inspection or Replacement - Aft Fairing and Aft Bulkhead (Sheet 6)



H



J

05022707

Figure 27. Inspection or Replacement - Aft Fairing and Aft Bulkhead (Sheet 7)

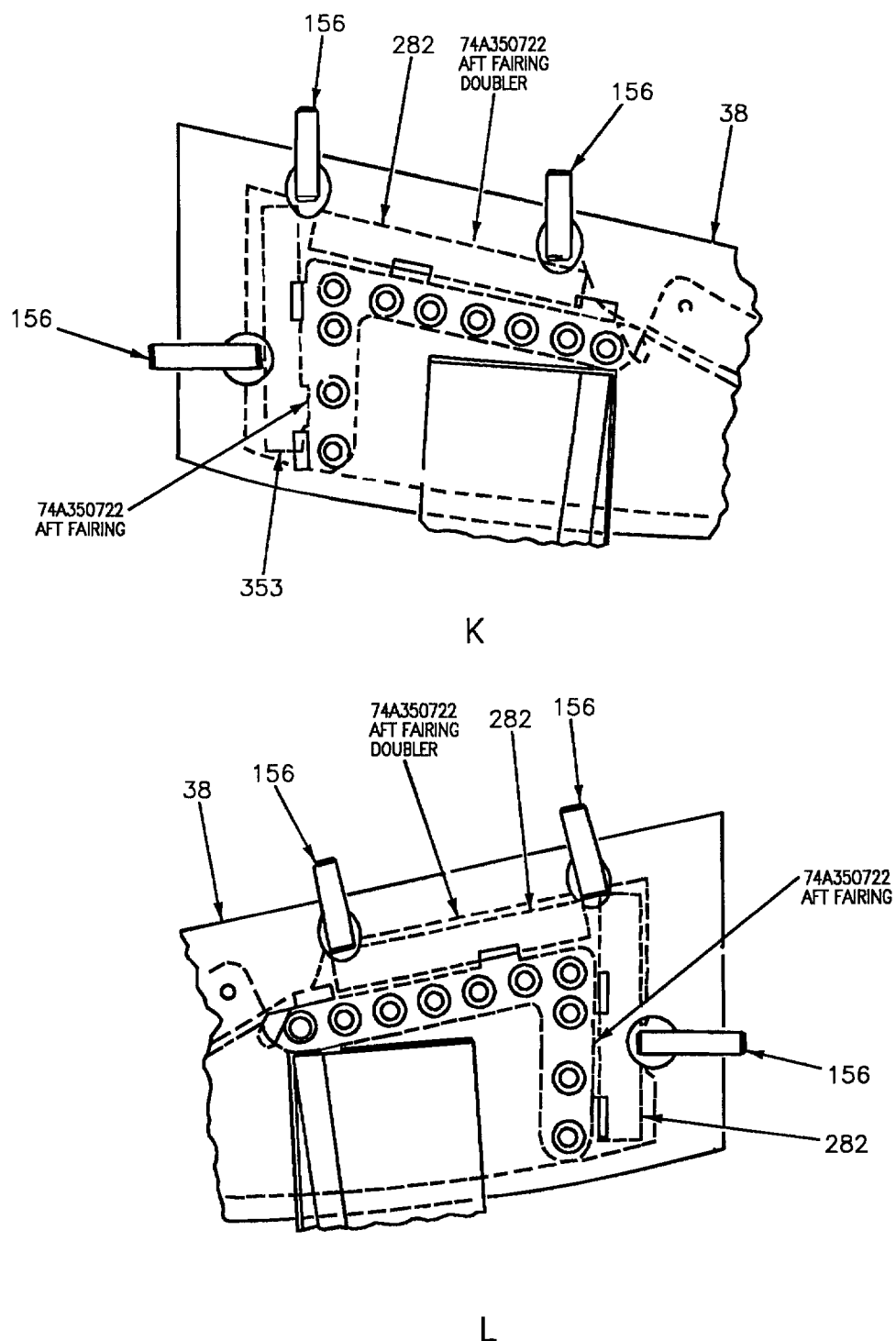


Figure 27. Inspection or Replacement - Aft Fairing and Aft Bulkhead (Sheet 8)

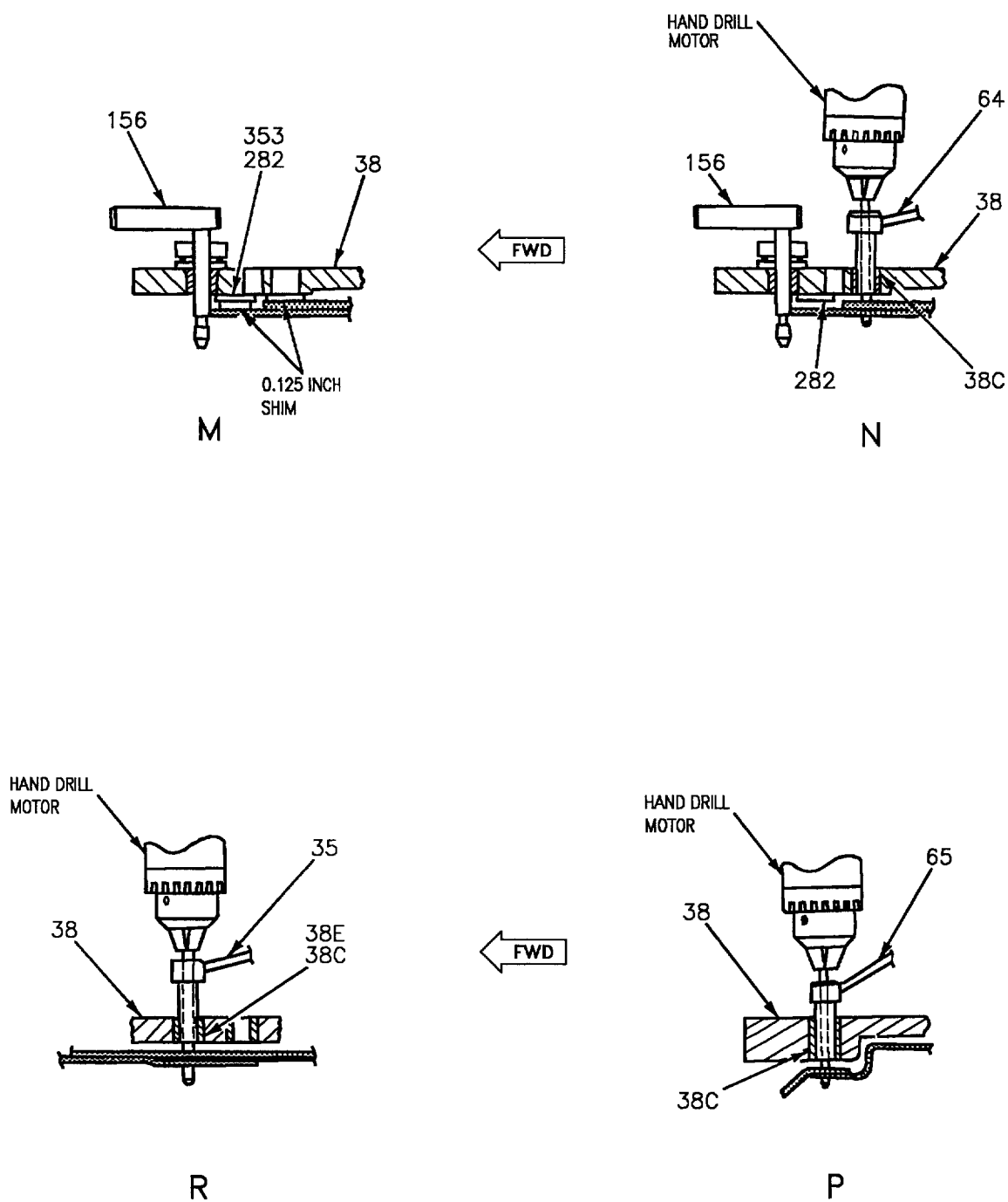


Figure 27. Inspection or Replacement - Aft Fairing and Aft Bulkhead (Sheet 9)

DETAIL NO.	NAME	FUNCTION
35	Traveler bushing	Guides 0.196 inch diameter drill.
38	Drill blanket	Locates and drills attachment holes in aft fairing and aft bulkhead.
38C	Drill bushing	Guides traveler bushing (detail 35, 64, 65).
38E	Drill bushing	Guides traveler bushing (detail 35).
56	GO, NO-GO gage	Used to check mold line contour of aft fairing.
60	Traveler bushing	Guides 0.1285 inch diameter drill in first oversize hole.
62	Traveler bushing	Guides 0.1285 inch diameter drill in second oversize hole.
64	Traveler bushing	Guides 0.098 inch diameter drill.
65	Traveler bushing	Guides 0.161 inch diameter drill.
66	Traveler bushing	Guides 0.1285 inch diameter drill in nominal size hole.
113	L-pin	Used to locate drill blanket (detail 38).
124, 125, 126	Locator	Used to inspect and locate aft fairing and aft bulkhead.
156	L-pin	Secures locator (detail 124, 125, 126) and locates aft fairing doublers.
174	Canted plate	Provides mold line reference for aft fairing and attachment points for various locators.
200	GO gage	Checks for minimum allowable trim line gap on aft edge of aft fairing.
201	NO-GO gage	Checks for maximum allowable trim line gap on aft edge of aft fairing.
207	Scribe	Scribes trim line on aft fairing.
209	Handknob	Used to secure drill blanket (detail 38) to fixture.
280	Trim plate	Provides trim line reference for inspecting or scribing aft edge trim line on aft fairing.
282, 353	Locator	Provides location of aft fairing under drill blanket (detail 38).
405, 406	Canted plate	Provides mold line reference for aft fairing.

Figure 27. Inspection or Replacement - Aft Fairing and Aft Bulkhead (Sheet 10)

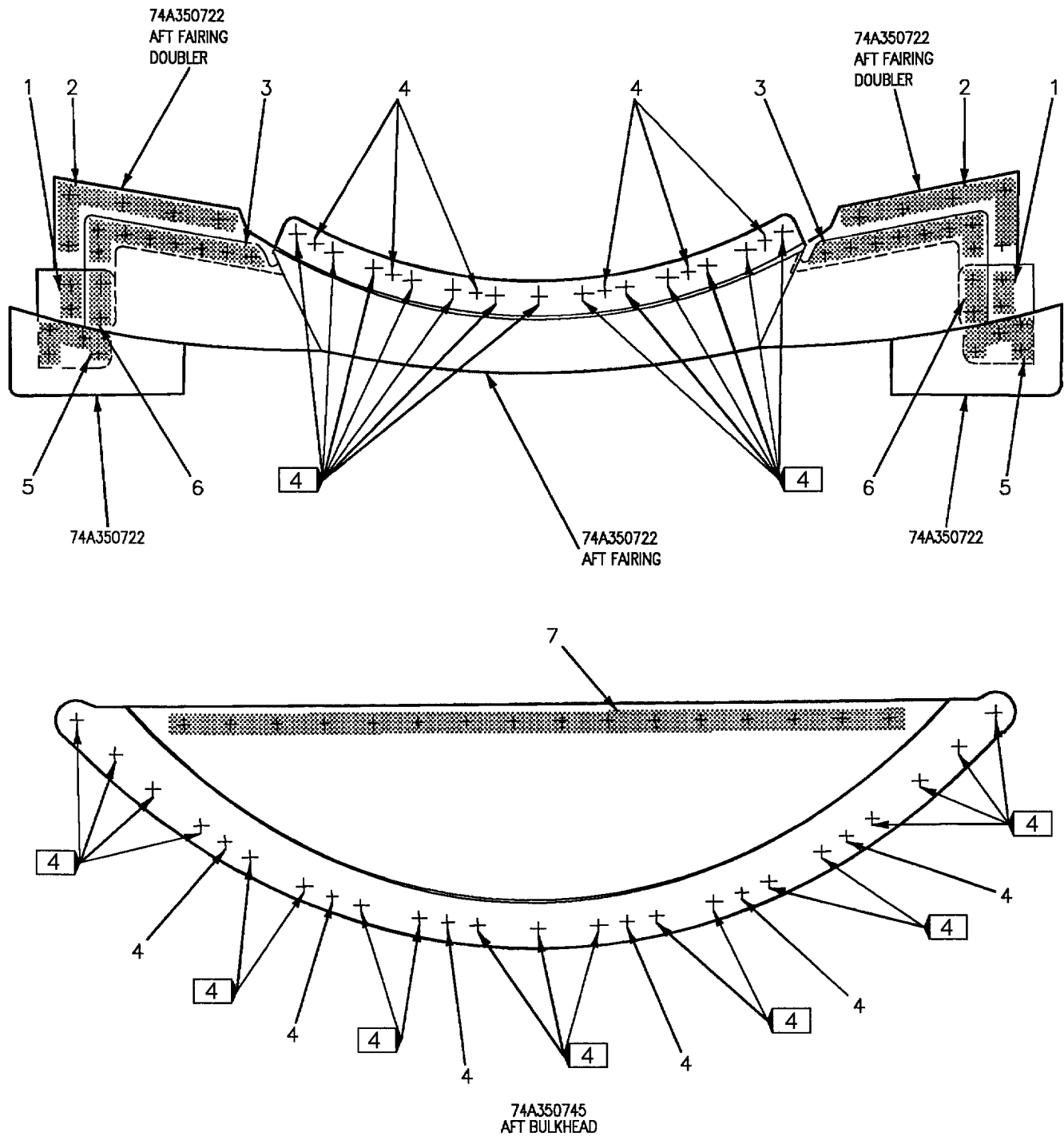


Figure 28. Aft Fairing, 74A350722, and Aft Bulkhead, 74A350745, Fastener Index (Sheet 1)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE		FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1		4	0.196 +0.006 -0.000		HT4041-3-3-5 2			F49249E3-1 3
2		10	0.196 +0.006 -0.000		HT4041-3-3-5 2	AN960C10L		NAS1291C3M
3	223 thru 230, 237 thru 244	16	0.161 +0.005 -0.000		MS20426AD5			
4	231 thru 236	6	0.098 +0.005 -0.000		MS20426AD3			
5		8	0.161 +0.005 -0.000		MS20426AD5			
6	221, 222, 245, 246	4	0.196 +0.006 -0.000		HT4041-3-3-5 2			F49249E3-1 3
7		16	0.159 +0.007 -0.000		MS20427AD5			
<p style="text-align: center;">LEGEND</p> <p>1 For oversize repair fasteners, see (A1-F18AC-SRM-200, WP004 07).</p> <p>2 Torque fastener to 15-25 inch. lbs.</p> <p>3 For rivets attaching platenuts to structure, see (A1-F18AC-SRM-200, WP004 05).</p> <p>4 Hole diameter is 0.196 +0.006 -0.000 inch at hole location 86 through 104.</p>								

Figure 28. Aft Fairing, 74A350722, and Aft Bulkhead, 74A350745, Fastener Index (Sheet 2)

36. **AFT SEAL RETAINER, 74A350713, INSPECTION AND REPLACEMENT.** See figure 29.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, Canopy	RE174350004-1
Repair Kit, Canopy	RE274350004-1

Material Required

Nomenclature	Specification or Part Number
Cheesecloth	CCC-C-440, Type 1, Class 1
Methyl Ethyl Ketone	TT-M-261
Rivet, Solid (27)	MS20426AD5
Sealing Compound	MIL-S-83430, Class A-1/2

37. INSPECTION



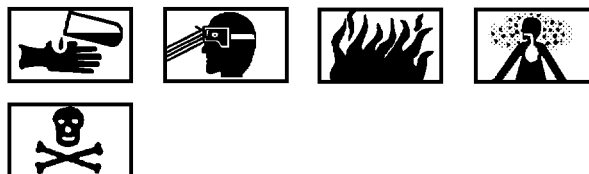
To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

- a. Make sure canopy is loaded correctly and secure (WP005 01).
- b. Position locator assembly (detail 32) on fixture base (detail 143, 144) by inserting L-pin (detail 113, 396), detail A.
- c. Rotate locator pin (detail 165) to locating position, detail B and D.
- d. Raise locator pin (detail 165) to Z plane location and install L-pin (detail 156) four places, detail D.
- e. If L-pin (detail 156) cannot be inserted, rotate locating pin (detail 165) to clearance fit position and measure for 0.125 inch nominal dimension between dowel pin (detail 277) and pad (detail 214), detail E.

f. If gap between dowel pin (detail 277) and pad (detail 214) exceeds 0.125 inch nominal dimension, aft seal retainer is out of tolerance and must be replaced.

38. REPLACEMENT.

a. Remove fasteners attaching damaged aft seal retainer to 74A350769 intercostal.



Methyl Ethyl Ketone

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b. Clean all residual sealing compound from mating structure using plastic scraper and cheesecloth moistened with methyl ethyl ketone.

c. Position new aft seal retainer over location pin (detail 165) and under 74A350769 intercostal.

d. Rotate locator pin (detail 165) to the locating position, detail D.

e. Raise locator pin (detail 165) to Z plane location and install L-pin (detail 156), detail D.

f. Engage toggle clamp (detail 139) four places to secure aft seal retainer in correct position, detail B.

g. Locate fastener pattern in aft seal retainer using existing holes in 74A350769 intercostal.

h. Drill 0.159 +0.007 -0.000 inch diameter hole 27 places.

i. Countersink holes in aft seal retainer to the flushness requirement of fastener.

j. Apply finish system (A1-F18AC-SRM-500, WP021 00).



Sealing Compound

7

k. Fay surface seal between aft seal retainer and 74A350769 intercostal (A1-F18AC-SRM-200, WP011 00).

l. Wet install MS20426AD5 rivets 27 places (A1-F18AC-SRM-200, WP011 00).

m. Fillet seal areas indicated, detail F.

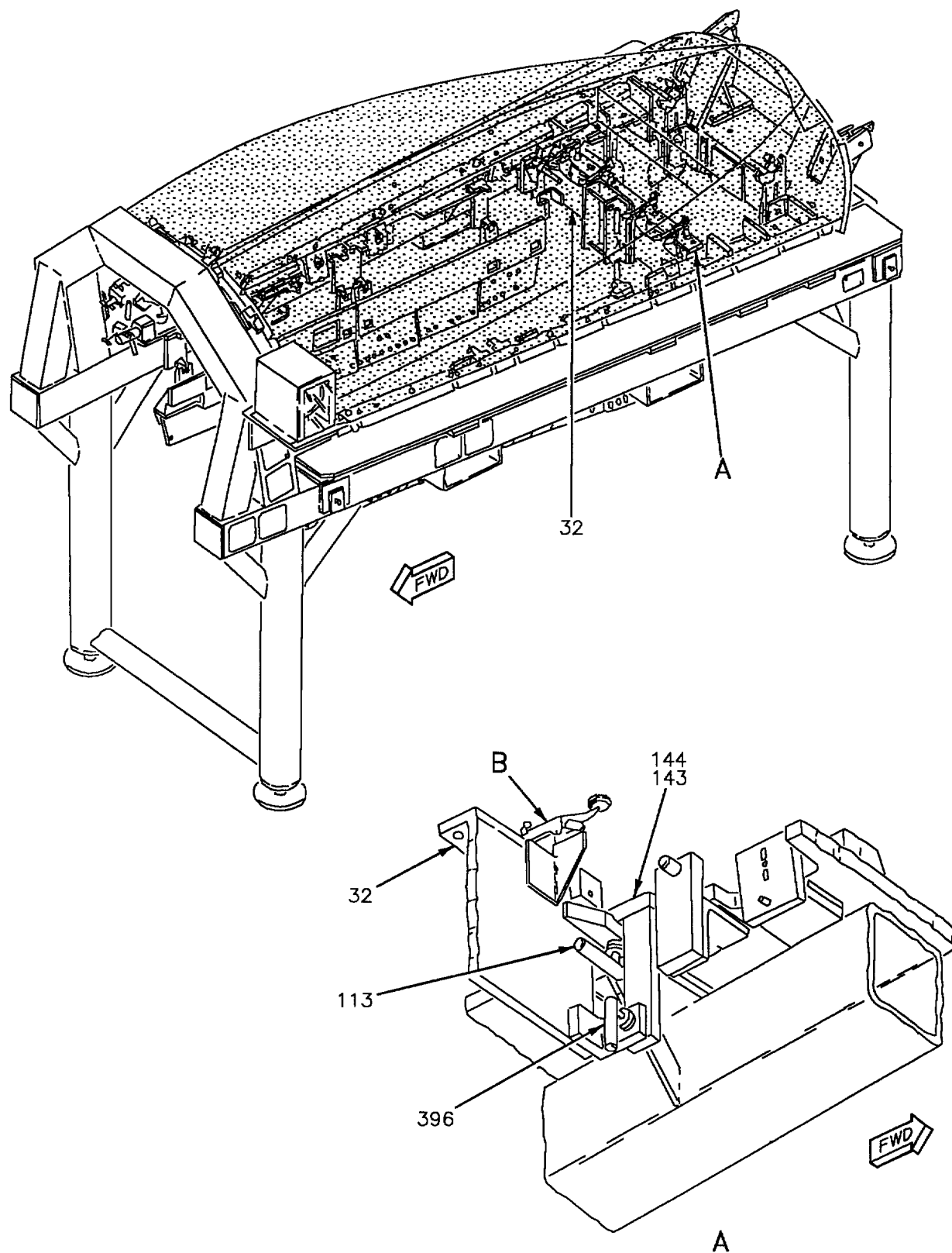


Figure 29. Inspection or Replacement - Aft Seal Retainer (Sheet 1)

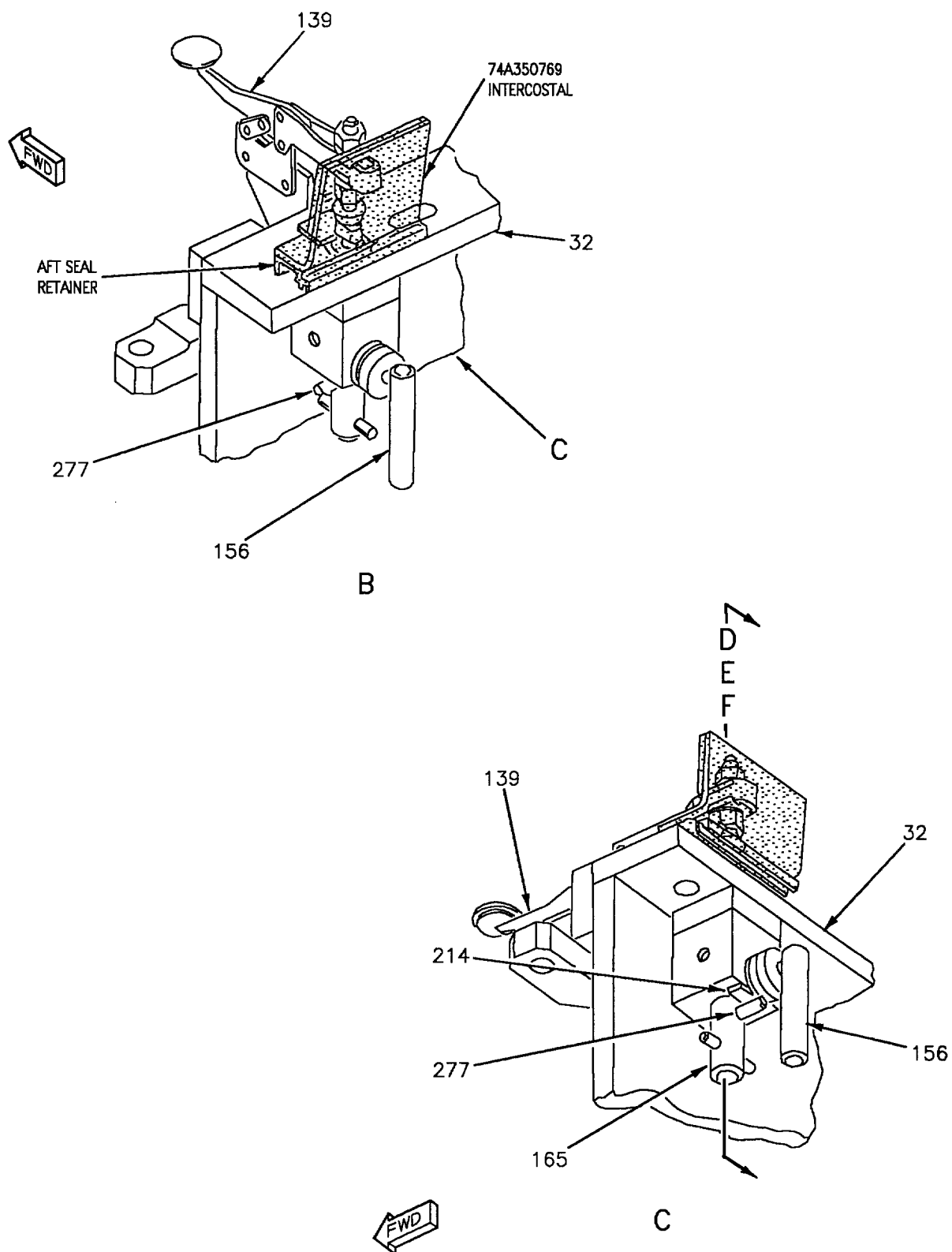


Figure 29. Inspection or Replacement - Aft Seal Retainer (Sheet 2)

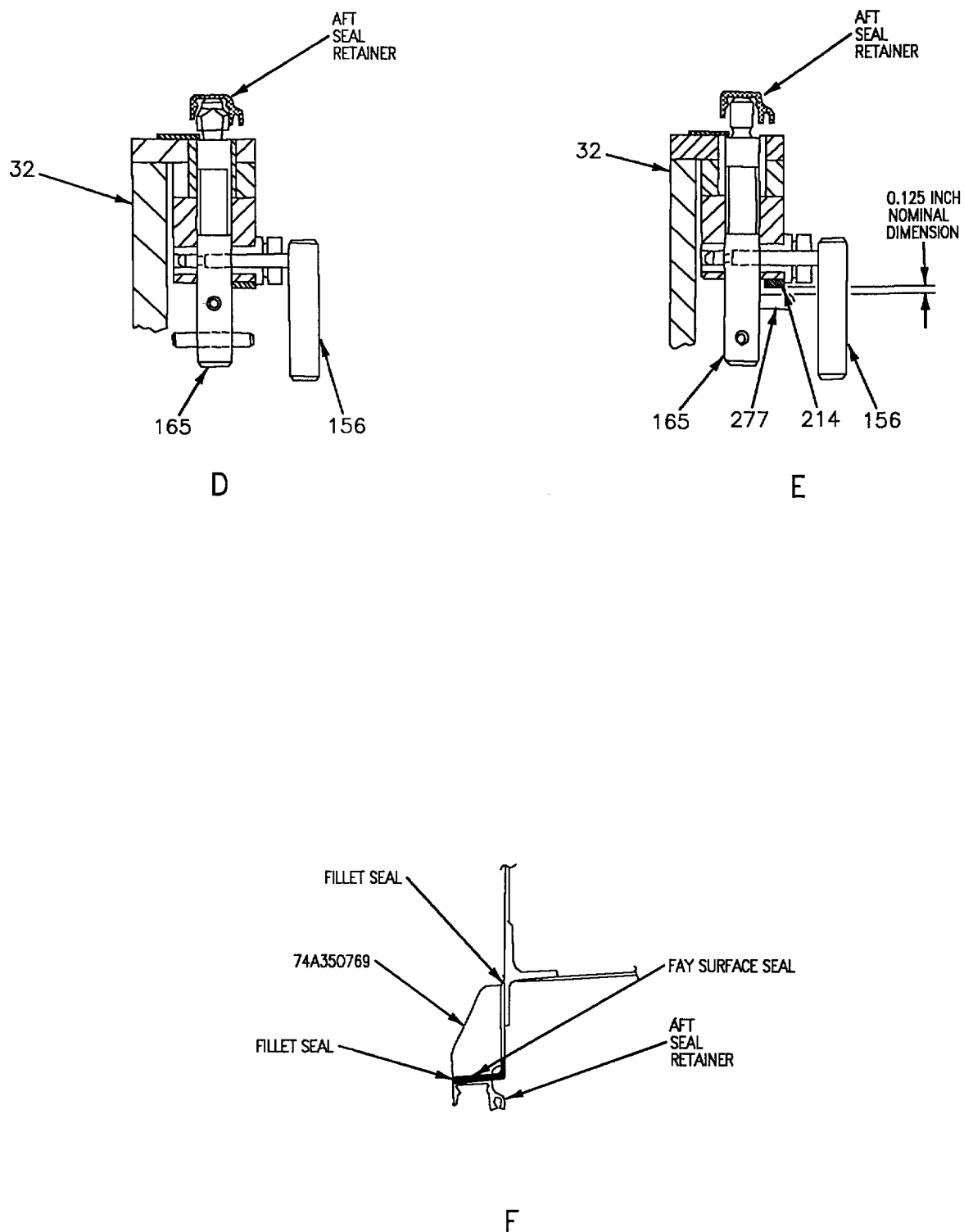


Figure 29. Inspection or Replacement - Aft Seal Retainer (Sheet 3)

DETAIL NO.	NAME	FUNCTION
32	Locator assembly	Locates aft seal retainer.
113	L-pin	Secures locator assembly (detail 32) to fixture.
139	Toggle clamp	Secures aft seal retainer to locator assembly (detail 32).
143, 144	Fixture base	Base of fixture to which most locators mount.
156	L-pin	Retains locator pin (detail 165).
165	Locator pin	Locates aft seal retainer on locator assembly (detail 32).
214	Pad	Measuring surface to measure gap between pad (detail 214) and dowel pin (detail 277).
277	Dowel pin	Measuring surface to measure gap between dowel pin (detail 227) and pad (detail 214).
396	L-pin	Secures locator assembly (detail 32) to fixture.

Figure 29. Inspection or Replacement - Aft Seal Retainer (Sheet 4)

DEPOT MAINTENANCE

STRUCTURE REPAIR

F/A-18A CANOPY TRANSPARENCY REMOVAL, INSTALLATION, AND REPLACEMENT

Reference Material

Maintenance Fixture, RE174350004, Loading F/A-18A Canopy	WP005 01
Aircraft Corrosion Control	A1-F18AC-SRM-500
Windshield, Canopy, and Cockpit Finish System	WP021 00
Structure Repair, General Information	A1-F18AC-SRM-200
Oversize Fasteners	WP004 07
Adhesive, Cement, and Sealant; Preparation and Application	WP011 00

Alphabetical Index

Subject	Page No.
Damaged Transparency Replacement	12
Drilling New Transparency and Structure	26
Transparency, 74A350700, Removal and Installation	1
Installation	2
Removal	2

Record of Applicable Technical Directives

None

1. TRANSPARENCY, 74A350700, REMOVAL AND INSTALLATION. See figure 1.

Materials Required

Support Equipment Required		Specification or Part Number	Nomenclature
Nomenclature	Part Number or Type Designation		
Maintenance Fixture, Canopy	RE174350004-1	Cheesecloth	CCC-C-440, Type 1, Class 1
		Cloth, Cleaning	Rymple Cloth - 301
		Isopropyl Alcohol	TT-I-735, Grade B
		Methyl Ethyl Ketone	TT-M-261
		Primer, Adhesive	PR142
		Sealing Compound	PR-1725, B2
Torque Wrench, 0 to 50 Inch-Pounds	-	Tape, Pressure Sensitive	A-A-883, Type 1, 1 inch

2. REMOVAL.

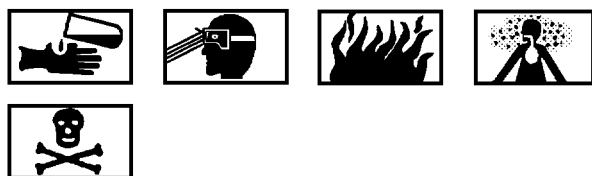
To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam cushioning material.

- a. Make sure canopy is loaded correctly and secure (WP005 01).
- b. Remove 74A350721 side fairing.
- c. Remove fasteners attaching transparency to canopy structure. See figure 2 for fastener location.
- d. Remove transparency from canopy and place in suitable holding fixture.



Use care when cleaning residual sealing compound from structure to prevent damage to 74A350004 silicone rubber strips.

- e. Clean all residual sealing compound from mating canopy structure with a plastic scraper.



Methyl Ethyl Ketone

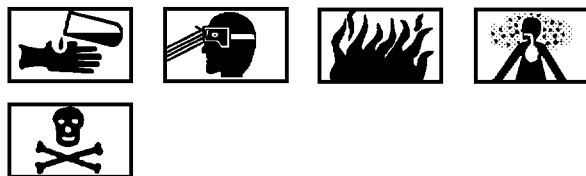
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- f. Clean mating canopy structure with cheesecloth moistened with methyl ethyl ketone.

- g. Apply finish system as required (A1-F18AC-SRM-500, WP021 00).

3. INSTALLATION.

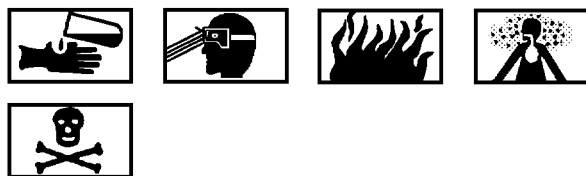
- a. Mask canopy structure next to surfaces being sealed, using pressure sensitive tape.



Isopropyl Alcohol

2

- b. Clean all surfaces on transparency and mating canopy structure receiving sealing compound with cleaning cloth moistened with isopropyl alcohol.

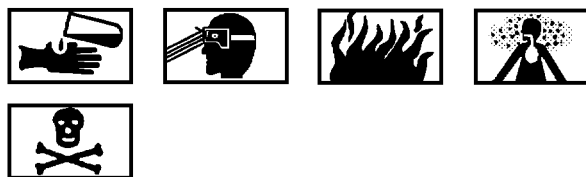


Adhesive Primer

19

- c. Brush apply one thin coat of adhesive primer to surfaces on transparency and mating canopy structure receiving sealing compound.

- d. Allow adhesive primer to air dry for a minimum of 15 minutes before applying sealing compound.



Sealing Compound

20

- e. Prepare sealing compound by mixing base component and accelerator to a weighed ratio of 100 parts base component to 10 parts accelerator.

- f. Thoroughly mix components until a uniform color appears.

- g. Install transparency, see figure 1:

(1) Fay surface seal areas indicated (A1-F18AC-SRM-200, WP011 00).

(2) Wet install fasteners, see figure 2 and (A1-F18AC-SRM-200, WP011 00).

(3) Fillet seal areas indicated (A1-F18AC-SRM-200, WP011 00).

- h. Reinstall 74A350721 side fairing.

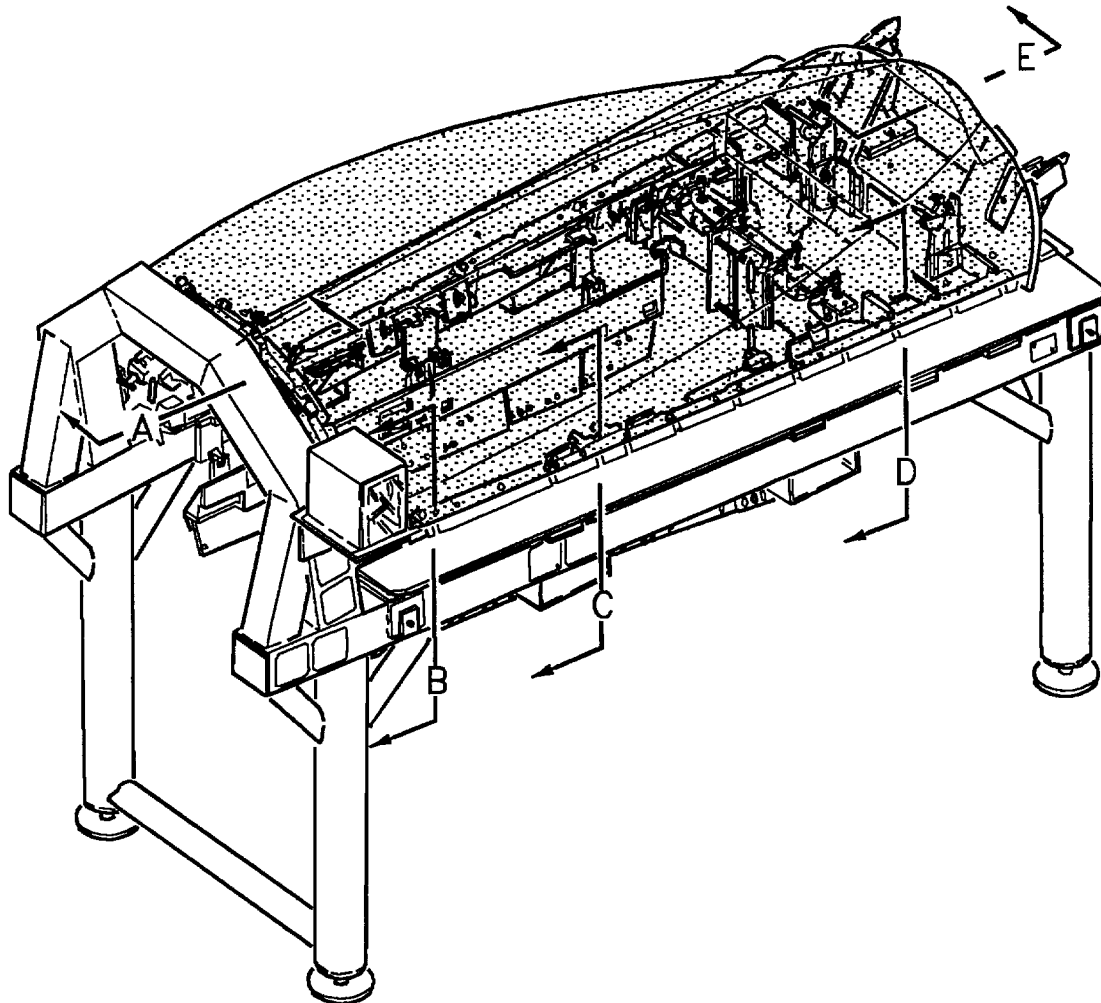


Figure 1. Transparency Removal and Installation (Sheet 1)

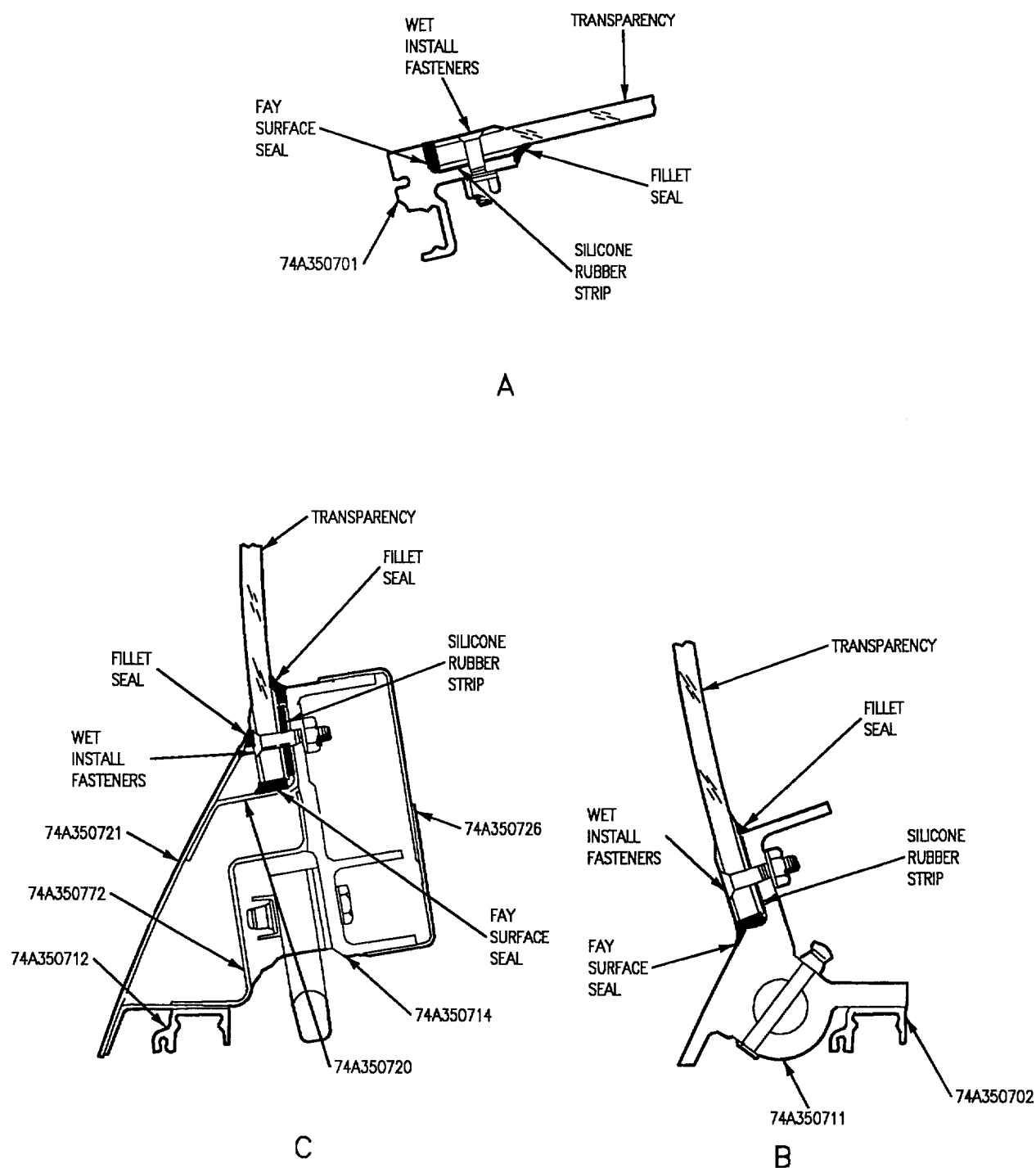
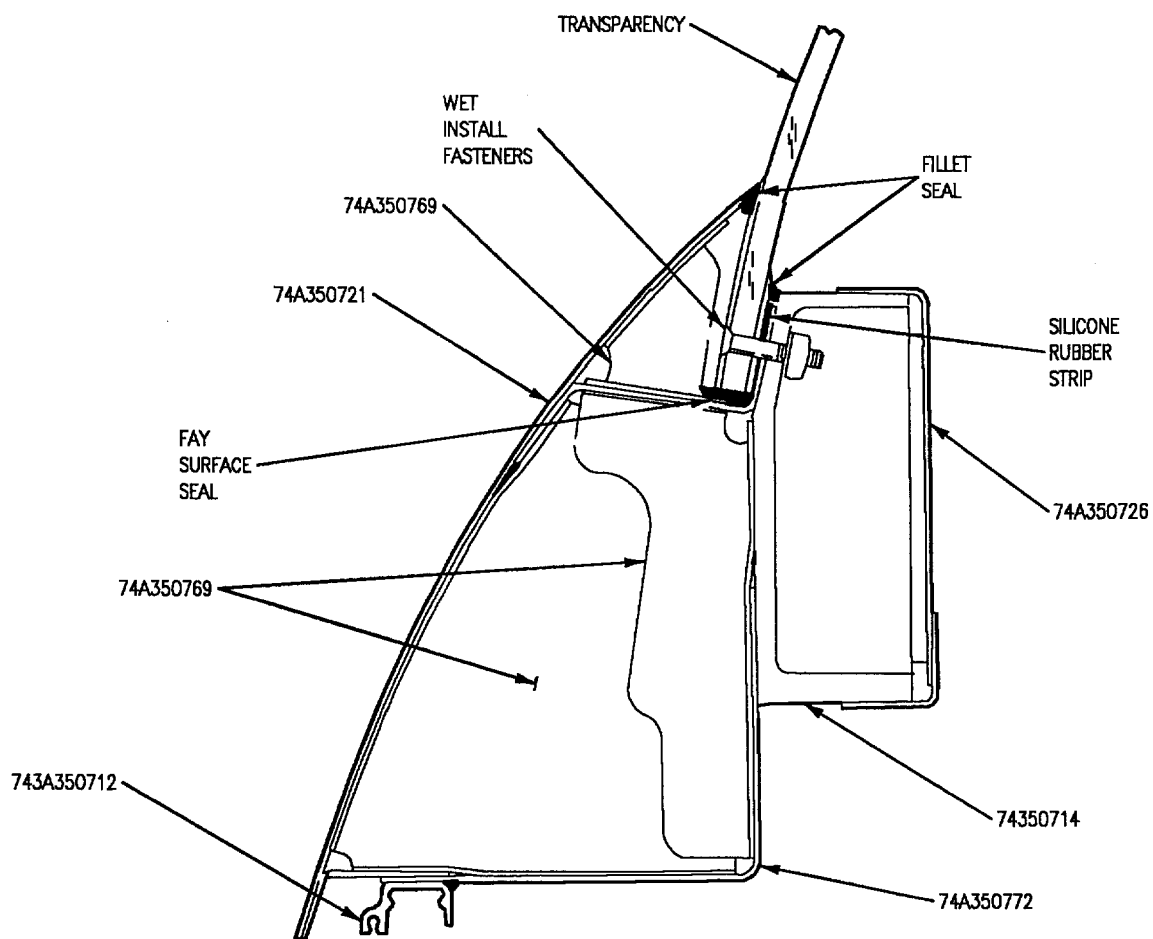
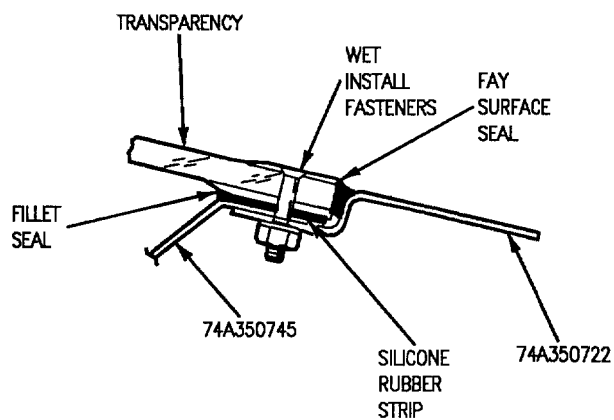


Figure 1. Transparency Removal and Installation (Sheet 2)



D



E

Figure 1. Transparency Removal and Installation (Sheet 3)

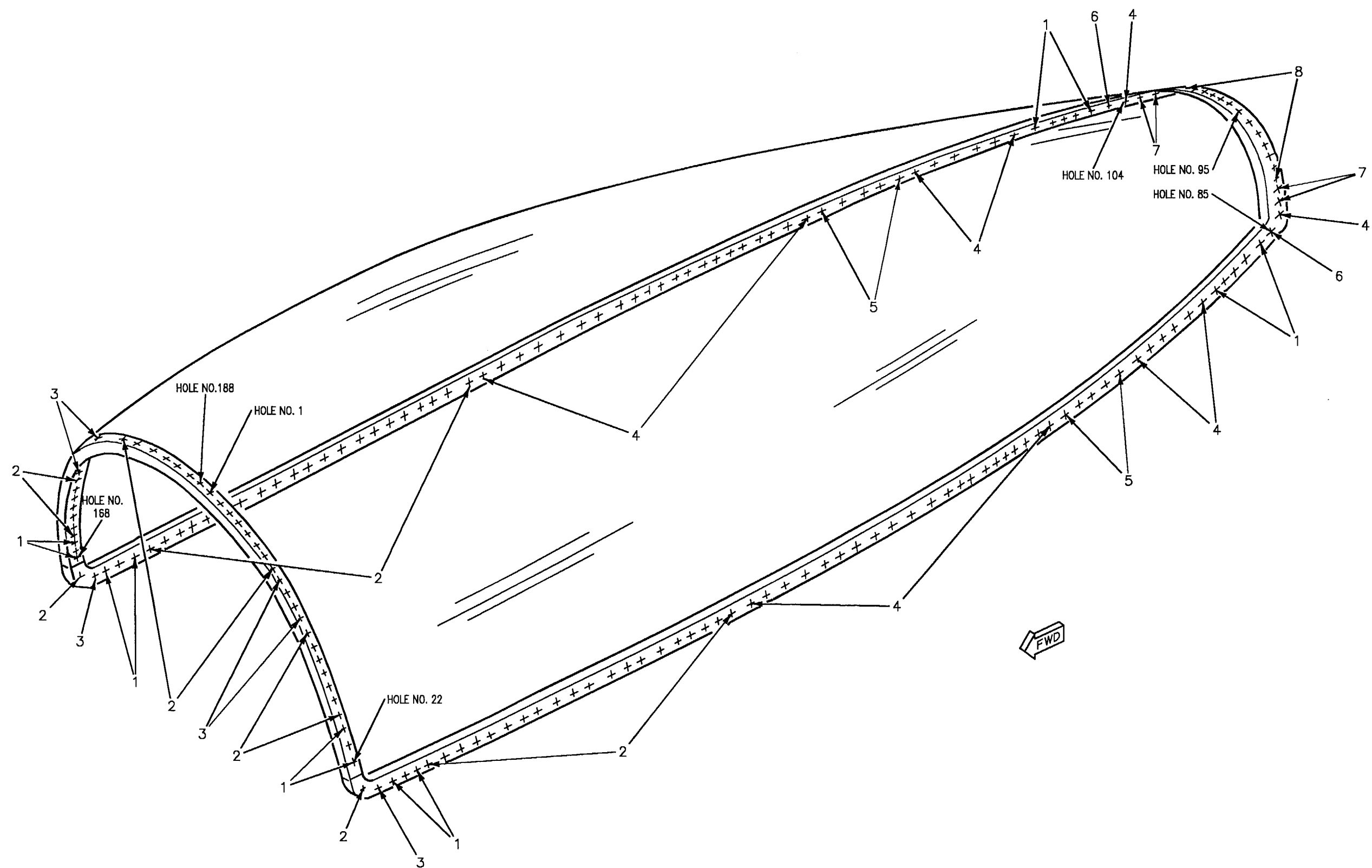


Figure 2

Figure 2. Transparency, 74A350700, Fastener Index (Sheet 1)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NUMBER	FASTENER 1	WASHER	SPACER BUSHING	RETAINER 2
1	3	22	0.195 +0.007 0-.000	PILOT 10 TFIM25.0215-004 NOM 9 SPT274A350004-5001TD 1ST OVS 9 SPT6RE174350004 2ND OVS 9 SPT7RE174350004 C'SINK 8 TFIM25.014-104	NAS663V13HT	AN960C10		NAS1291C3M
2	4	71	0.195 +0.007 0-.000	PILOT 10 TFIM25.0215-004 NOM 9 SPT274A350004-5001TD 1ST OVS 9 SPT6RE174350004 2ND OVS 9 SPT7RE174350004 C'SINK 8 TFIM25.014-104	NAS663V10HT	AN960C10L AN960C10 7		NAS1291C3M
3	5	10	0.195 +0.007 -0.000	PILOT 10 TFIM25.0215-004 NOM 9 SPT274A350004-5001TD 1ST OVS 9 SPT6RE174350004 2ND OVS 9 SPT7RE174350004 C'SINK 8 TFIM25.014-104	NAS663V10HT	AN960C10L		NAS1291C3M
4	6	56	0.195 +0.007 -0.000	PILOT 10 TFIM25.0215-004 NOM 9 SPT274A350004-5001TD 1ST OVS 9 SPT6RE174350004 2ND OVS 9 SPT7RE174350004 C'SINK 8 TFIM25.014-104	NAS663V10HT	AN960C10L		NAS1291C3M

Figure 2. Transparency, 74A350700, Fastener Index (Sheet 2)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NUMBER	FASTENER 1	WASHER	SPACER BUSHING	RETAINER 2
5	69 thru 73, 117 thru 121	10	0.195 +0.007 -0.000	PILOT 10 TFIM25.0215-004 NOM 9 SPT274A350004-5001TD 1ST OVS 9 SPT6RE174350004 2ND OVS 9 SPT7RE174350004 C'SINK 8 TFIM25.014-104	NAS663V11HT	AN960C10L		NAS1291C3M
6	85, 105	2	0.195 +0.007 -0.000	PILOT 10 TFIM25.0215-004 NOM 9 SPT274A350004-5001TD 1ST OVS 9 SPT6RE174350004 2ND OVS 9 SPT7RE174350004 C'SINK 8 TFIM25.014-104	NAS663V15HT	AN960C10		NAS1291C3M
7	87, 88, 102, 103	4	0.195 +0.007 -0.00	PILOT 10 TFIM25.0215-004 NOM 9 SPT274A350004-5001TD 1ST OVS 9 SPT6RE174350004 2ND OVS 9 SPT7RE174350004 C'SINK 8 TFIM25.014-104	NAS663V8HT	AN960C10		NAS1291C3M
8	89 thru 101	13	0.195 +0.007 -0.000	PILOT 10 TFIM25.0215-004 NOM 9 SPT274A350004-5001TD 1ST OVS 9 SPT6RE174350004 2ND OVS 9 SPT7RE174350004 C'SINK 8 TFIM25.014-104	NAS663V8HT	AN960C10L		NAS1291C3M

Figure 2. Transparency, 74A350700, Fastener Index (Sheet 3)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NUMBER	FASTENER 1	WASHER	SPACER BUSHING	RETAINER 2
LEGEND								
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

Figure 2. Transparency, 74A350700, Fastener Index (Sheet 4)

4. DAMAGED TRANSPARENCY RE-PLACEMENT. See figures 2 and 3.



Support Equipment Required

Nomenclature	Part Number or Type Designation
Accessory Kit, Drilling Machine	RE574000002-1
Aircraft Structure Repair Tool Kit	74D110325-1001
Drill Machine	74D110311-1001
Maintenance Fixture, Canopy	RE174350004-1
Repair Kit, Canopy	RE274350004-1
Repair Kit, Canopy	RE274350006-1
Tank Assembly, Coolant, Spray Mist	RE874000002-1
Transparency Drill Jig	74D110310-1001

Materials Required

None

a. Make sure canopy is loaded correctly and secure (WP005 01).

b. Remove damaged transparency per paragraph 2, this WP.



To prevent damage to new transparency, make sure barrier material and ethyl foam cushioning material is installed.

c. Position new transparency on mating canopy structure.

d. Assemble clamp half (details 13, 14) onto arch base (detail 105) eight places per steps below:

(1) Install clamp half (detail 13) from mold line side of arch base (detail 105), detail A.

(2) Install clamp half (detail 14) over clamp half (detail 13) and rotate to lock position, detail A.

Excessive pressure on transparency by thumb-screw (detail 148) can cause gouges, cracks, or distortion.

e. Tighten thumbscrew (detail 148) to secure transparency to canopy arch, detail B.

f. Install drill blanket (details 28, 29) onto arch base (detail 105) by inserting L-pin (detail 112) and T-pin (detail 147) eight places, detail C.



Excessive pressure on transparency by swivel foot screw (detail 311) can cause gouges, cracks, or distortion.

g. Adjust swivel foot screw (detail 311) against transparency nine places to hold transparency firmly against canopy structure, detail C.

h. Locate drill blanket (detail 40) as follows:

(1) Position forward end of drill blanket (detail 40) on fixture base (details 143, 144) by inserting L-pins (detail 113) two places and secure by installing handknob (detail 205) two places.

(2) Position aft end of drill blanket (detail 40) on drill blanket support (detail 121) by inserting L-pin (detail 113) four places and secure with handknob (detail 205) two places, detail F.



Excessive pressure on transparency by swivel foot screw (detail 270) can cause gouges, cracks, or distortion.

i. Adjust swivel foot screw (detail 270) against transparency ten places to hold transparency firmly against canopy structure, detail G.



Excessive pressure on transparency by thumbscrew assembly (detail 305, 306) can cause gouges, cracks, or distortion.

j. Install thumbscrew assembly (detail 305, 306) at eight evenly spaced places around drill blanket (detail 40) as follows:

(1) Insert thumbscrew (detail 305) into drill bushing (detail 40D), detail J.

(2) Rotate lock tab on thumbscrew (detail 306) in drill bushing (detail 40D), detail J.

(3) Tighten thumbscrew (detail 305) to secure transparency to canopy structure.

k. Position clamp assembly (subassembly C, D) on fixture base (detail 143, 144) by inserting L-pin (detail 198) four places and secure by installing handknob (detail 199) six places.



Excessive pressure on transparency by thumbscrew (detail 262) can cause gouges, cracks, or distortion.

l. Tighten thumbscrew (detail 262) 16 places to secure transparency to canopy structure, detail N.

m. At hole location 1 through 22 and 168 through 188:

(1) Install applicable traveler bushing (detail 57, 60, or 62) into existing holes in canopy structure, detail L.

(2) Mark location of any fastener hole drilled oversize.

(3) Back drill 0.1285 inch diameter pilot hole 0.100-inch deep.

n. At hole location 23 through 69 and 121 through 167:

(1) Install applicable traveler bushing (detail 58, 61, or 63) into existing holes in canopy structure, detail N.

(2) Mark location of any fastener hole drilled oversize.

(3) Back drill 0.1285 inch diameter pilot hole 0.100 inch deep.

o. At hole location 80 through 84, 86 through 104, and 106 through 110:

(1) Install applicable traveler bushing (details 57, 60, or 62) into existing holes in canopy structure, detail R.

(2) Mark location of any fastener hole drilled oversize.

(3) Back drill 0.1285 inch diameter pilot hole 0.100 inch deep.

p. Remove drill blanket (details 28, 29, 40), clamp assembly (subassemblies C, D), and clamp half (detail 13, 14).

q. Remove transparency.

r. Open back drilled holes full size.

(1) Position 74D110310-1001 transparency drill jig over 0.100-inch deep back drilled holes.

(2) Insert 0.1285 or 0.1170 inch diameter locating pin (detail 101, 102, part of 74D110310-1001 drill jig) into applicable back drilled holes and clamp in place.

(3) Remove locating pin.

(4) Insert coolant bushing (subassembly A, B, part of 74D110310-1001 drill jig) into 74D110310-1001 drill jig.

(5) Attach RE874000002-1 tank assembly to coolant bushing and peck drill pilot hole through transparency using 1000 RPM hand drill and applicable pilot hole drill per figure 2.

(6) Remove coolant bushing.

(7) Install RE574000002-1 coolant bushing and nose piece (subassembly Y, Z, and detail 151) on 74D110311-1001 drill machine.

(8) Adjust feedrate to 1.5 inch/minute and dwell to 1 second.

(9) Install 74D110311-1001 drill machine to 74D110310-1001 drill jig.

(10) Attach RE874000002-1 tank assembly to RE574000002-1 coolant bushing.

(11) Drill holes full size using applicable drill per figure 2.

s. At hole location 70 through 79, 85, 105, and 111 through 120:

(1) Reinstall drill blanket (detail 40) per paragraph 4, step h, this WP.

(2) Insert centering scope (detail 413) through drill bushing (detail 40D), detail T.

NOTE

Numbers next to lines on centering scope (detail 413) indicate drill size required to clean up existing holes in canopy structure. Number 8 indicates nominal, number 3 indicates first oversize, number 1 indicates second oversize, and letter G indicates 1/4 oversize.

(3) Rotate centering scope (detail 413) to determine which line on centering scope is nearest to diameter of existing hole in canopy structure, detail T.

(4) Record drill size required to clean up each hole.

(5) Remove drill blanket (detail 40).

(6) Position transparency on canopy structure and secure by installing several fasteners at various locations. See figure 2 for fastener information.

(7) Reinstall clamp half (details 13, 14), clamp assembly (subassemblies C, D), and drill blanket (details 28, 29, and 40) per paragraph 4, steps d through l.

(8) For holes in canopy structure that align with drill blanket (detail 40) and require nominal size fasteners:

(a) Insert traveler bushing (subassembly B) with coolant adapter and quick disconnect coolant line into drill bushing (detail 40D), detail V.

(b) Drill 0.1285 inch diameter pilot hole.

(c) Drill pilot hole full size using 74D110311-1001 drilling machine and RE574000002-1 coolant bushing and nose piece. Countersink hole on mold line side to flushness requirement of fastener, see figure 2.

(9) For holes in canopy structure that are not in alignment with drill blanket (detail 40) and require oversize fasteners:

(a) Insert traveler bushing (subassembly B) with coolant adapter and quick disconnect coolant line into drill bushing (detail 40D), detail V.

(b) Drill 0.1285 inch diameter pilot hole.

(c) Drill pilot hole to 0.195 +0.007 -0.000 inch nominal size using 74D110311-1001 drilling machine and RE574000002-1 coolant bushing and nose piece.

(d) Ream holes in transparency and canopy structure to required oversize diameter as determined by centering scope (detail 413) in steps, (3), see figure 2.

(e) Countersink hole on mold line side of transparency to flushness requirement of fastener.

t. Remove fasteners temporarily securing transparency to canopy structure.

u. Remove transparency.

v. Clean area of all loose material.

w. Visually inspect each hole for flaws. Repair holes containing any of the following conditions:

(1) Cracks or laminar splits.

(2) Frosted crazed surface typical of condition resulting from drill flutes packed with chips. These holes will usually be oversize.

x. The following conditions may be visible but are not rejectable flaws:

(1) Helical rub marks from drill withdrawal which have no measurable depth.

(2) Countersink pilot rub marks which have no measurable depth.

(3) Minor surface crazing that covers less than one third of the hole surface.

y. Install transparency on canopy structure per paragraph 3, this WP.

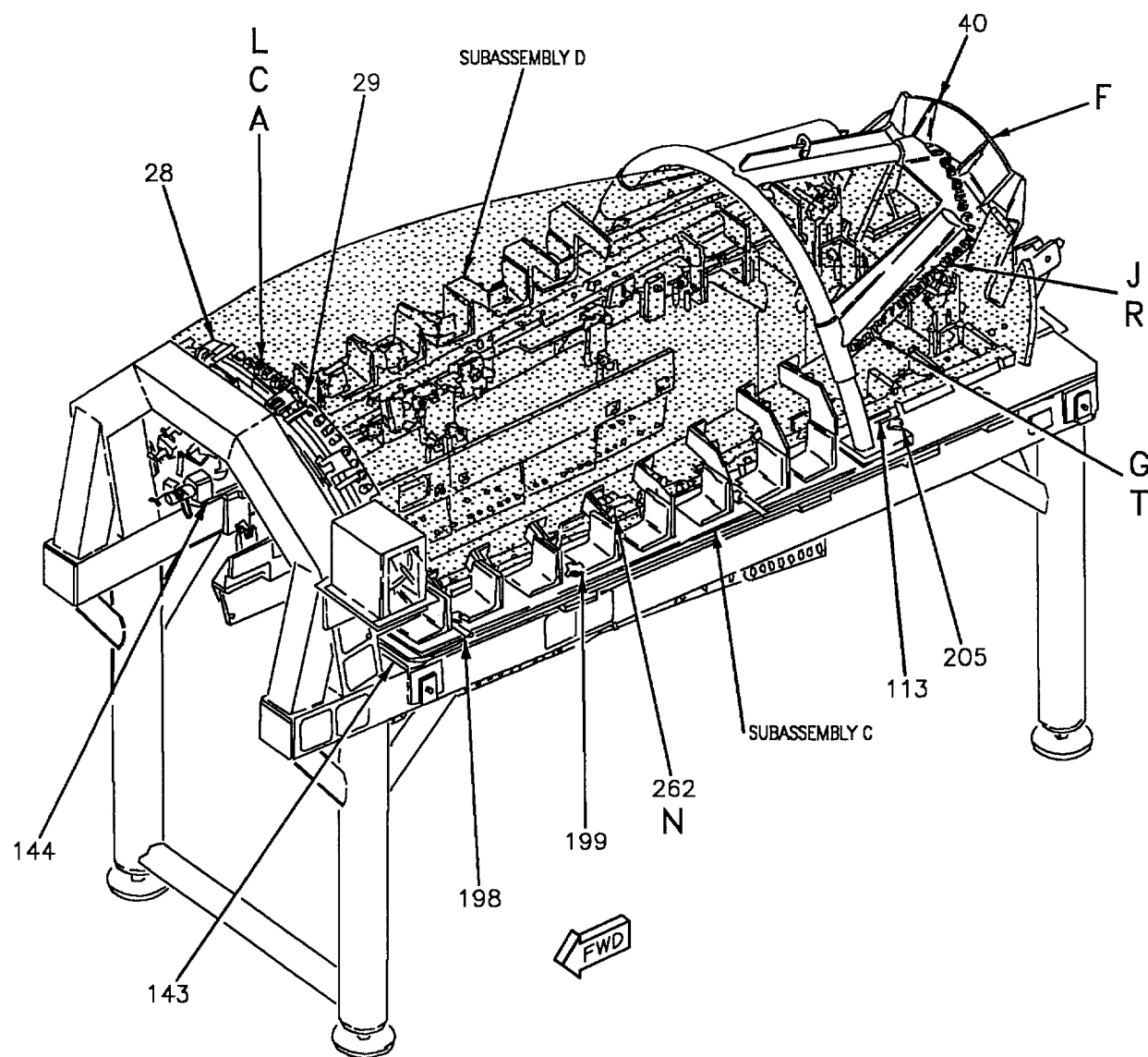


Figure 3. Damaged Transparency Replacement (Sheet 1)

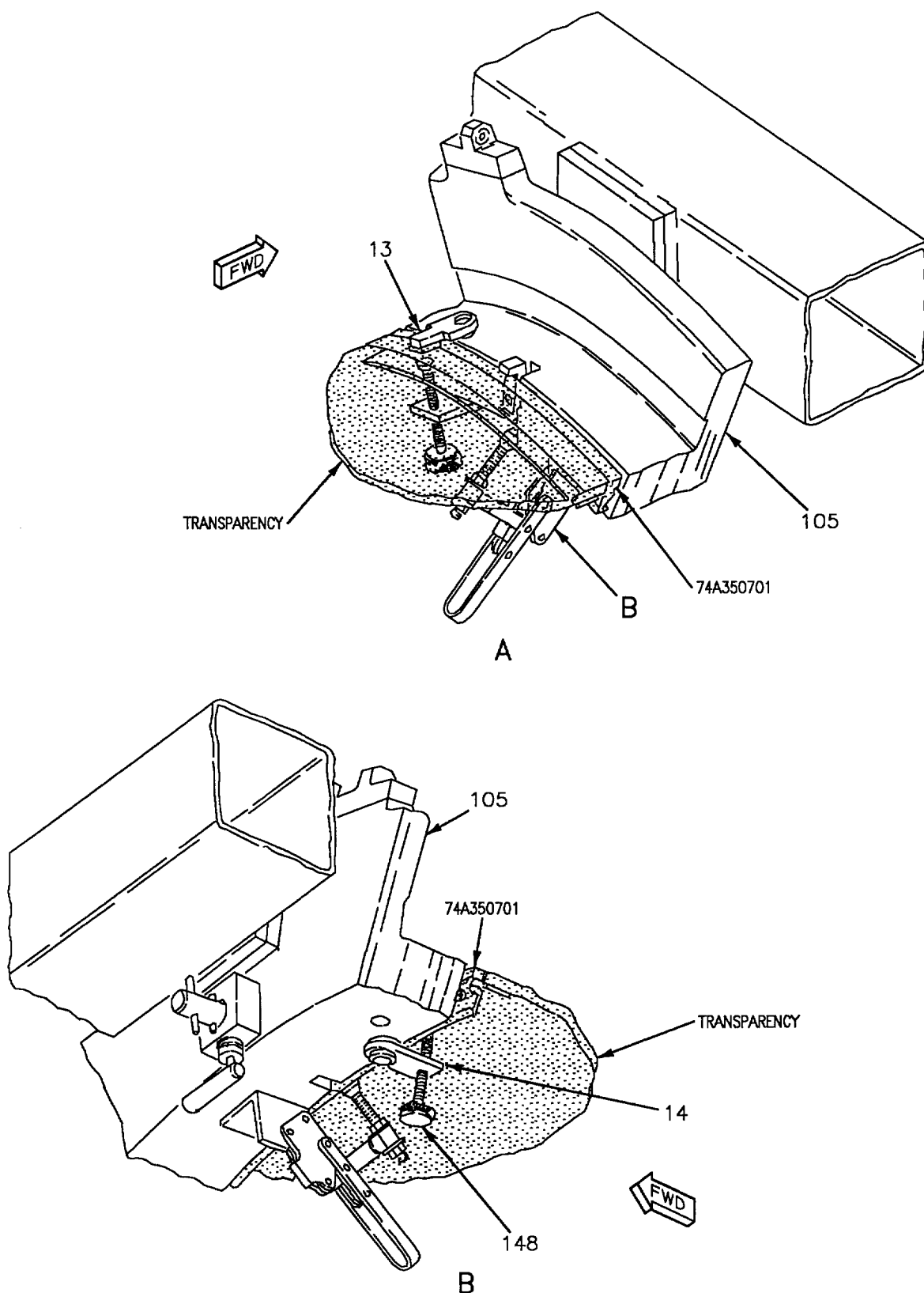


Figure 3. Damaged Transparency Replacement (Sheet 2)

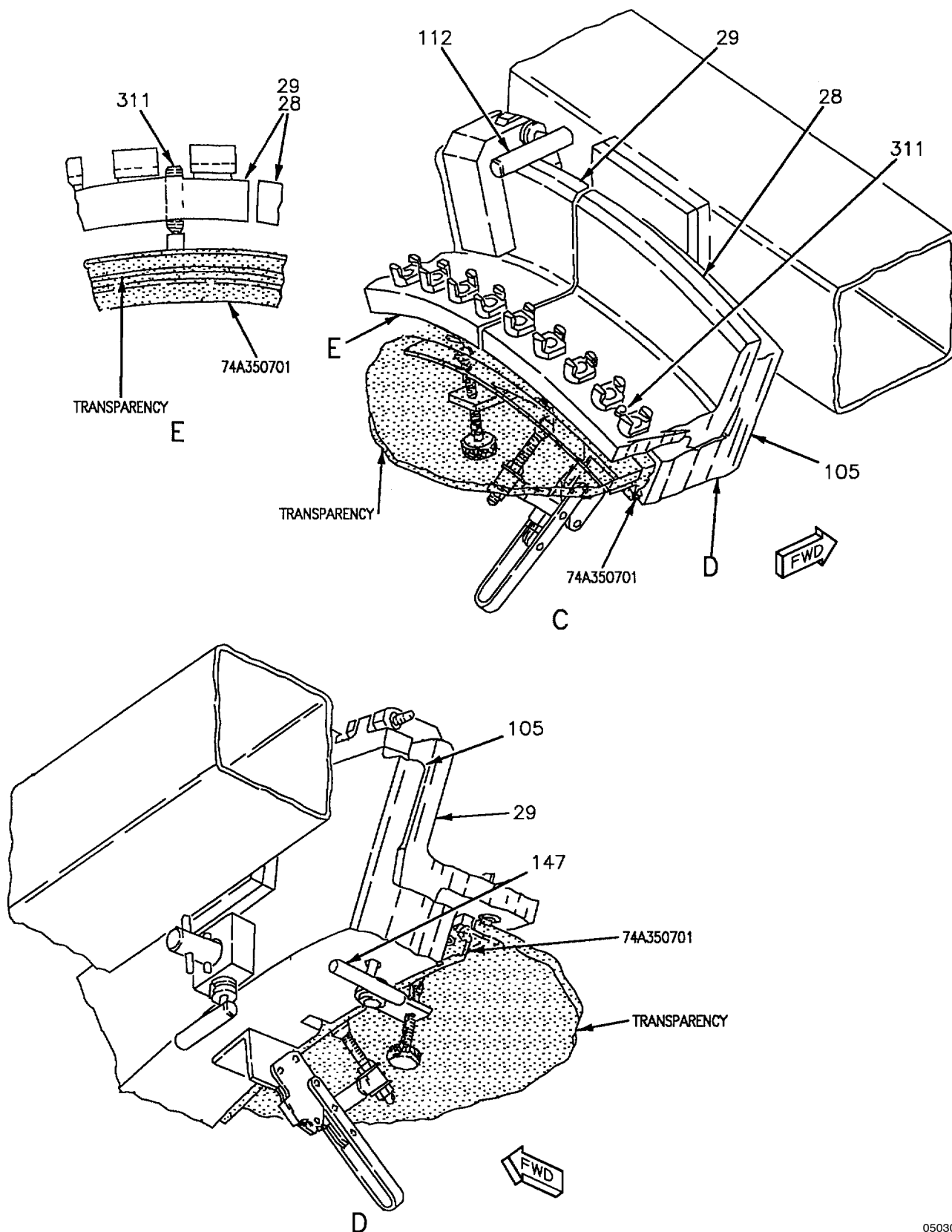


Figure 3. Damaged Transparency Replacement (Sheet 3)

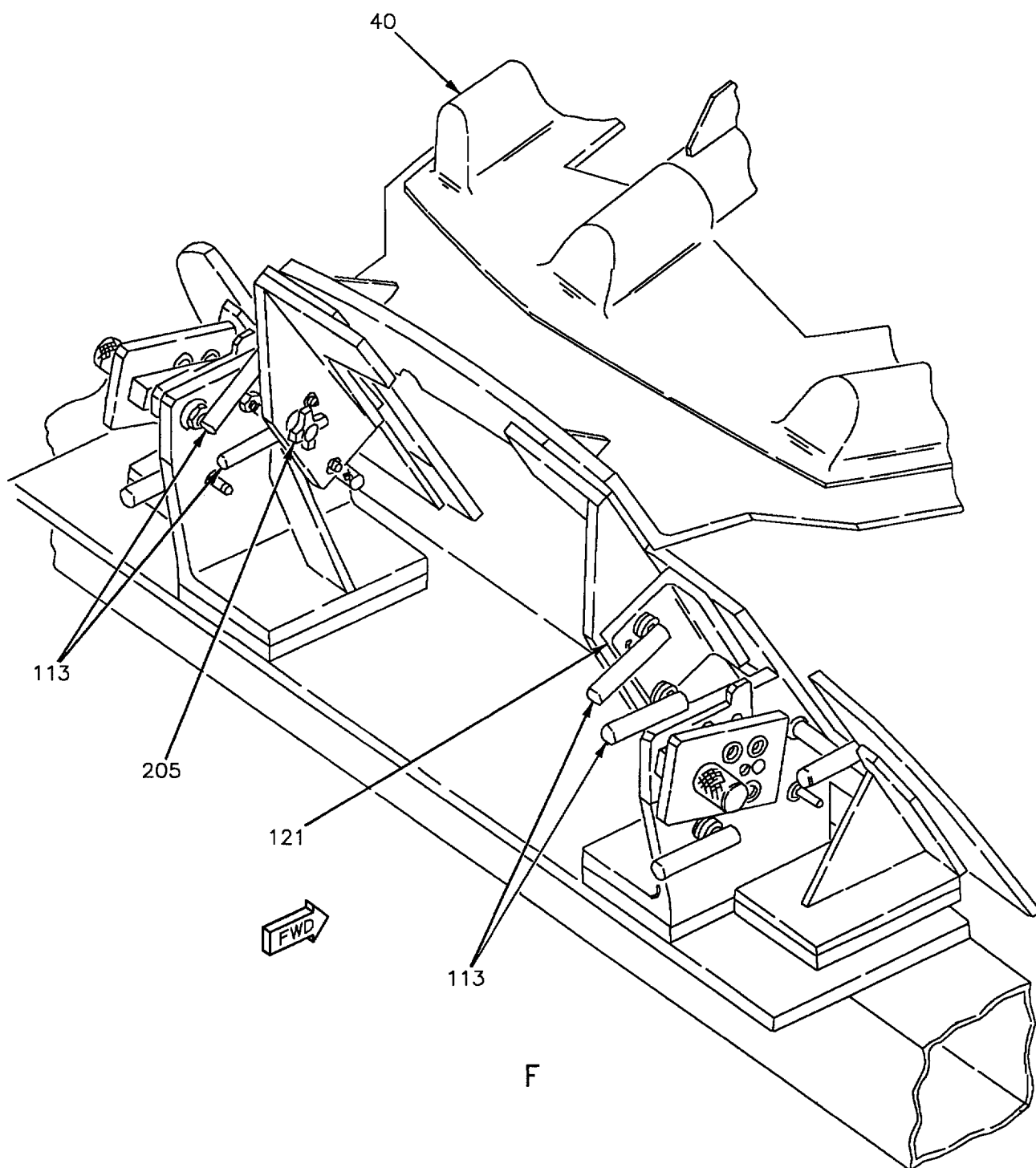


Figure 3. Damaged Transparency Replacement (Sheet 4)

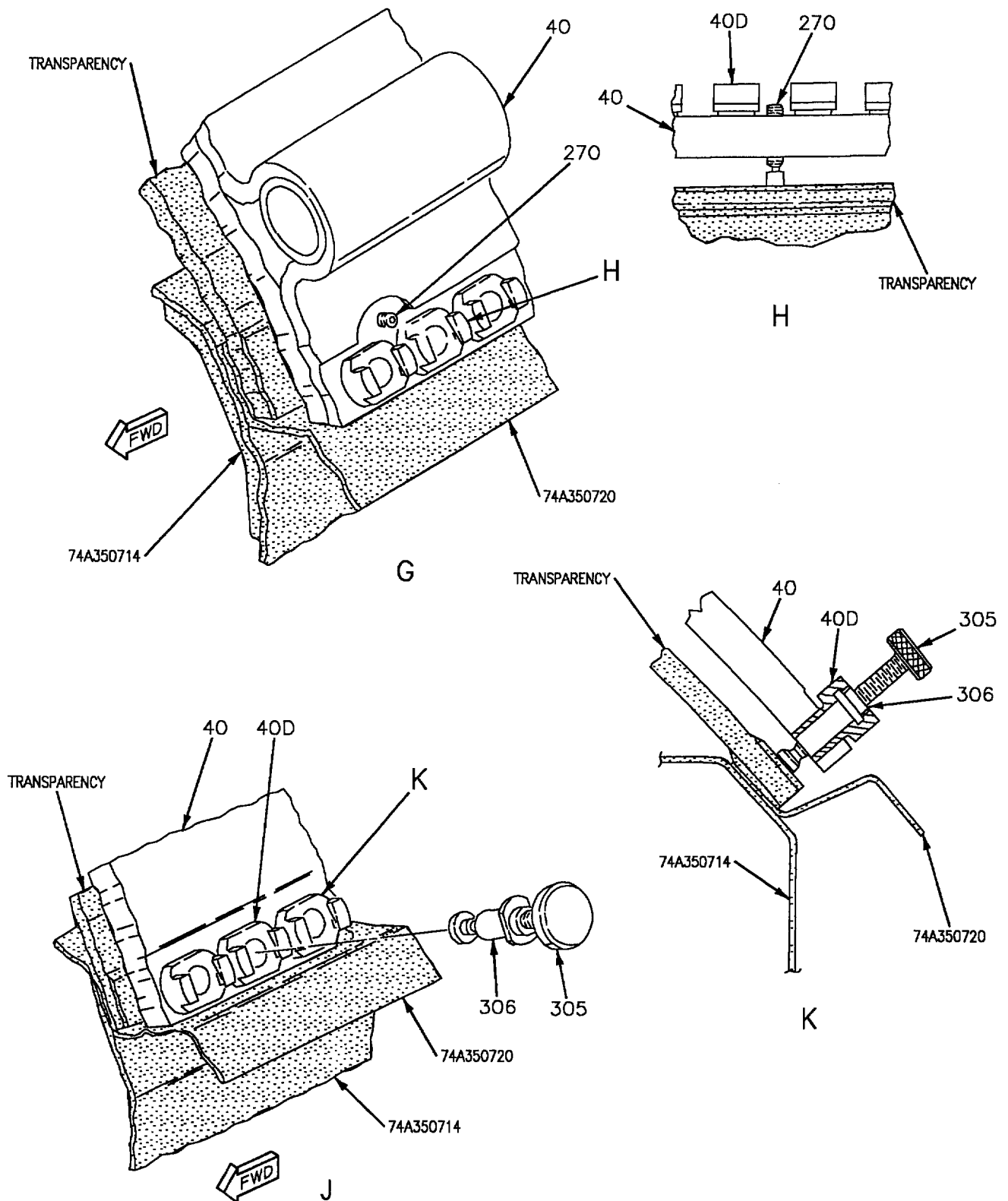
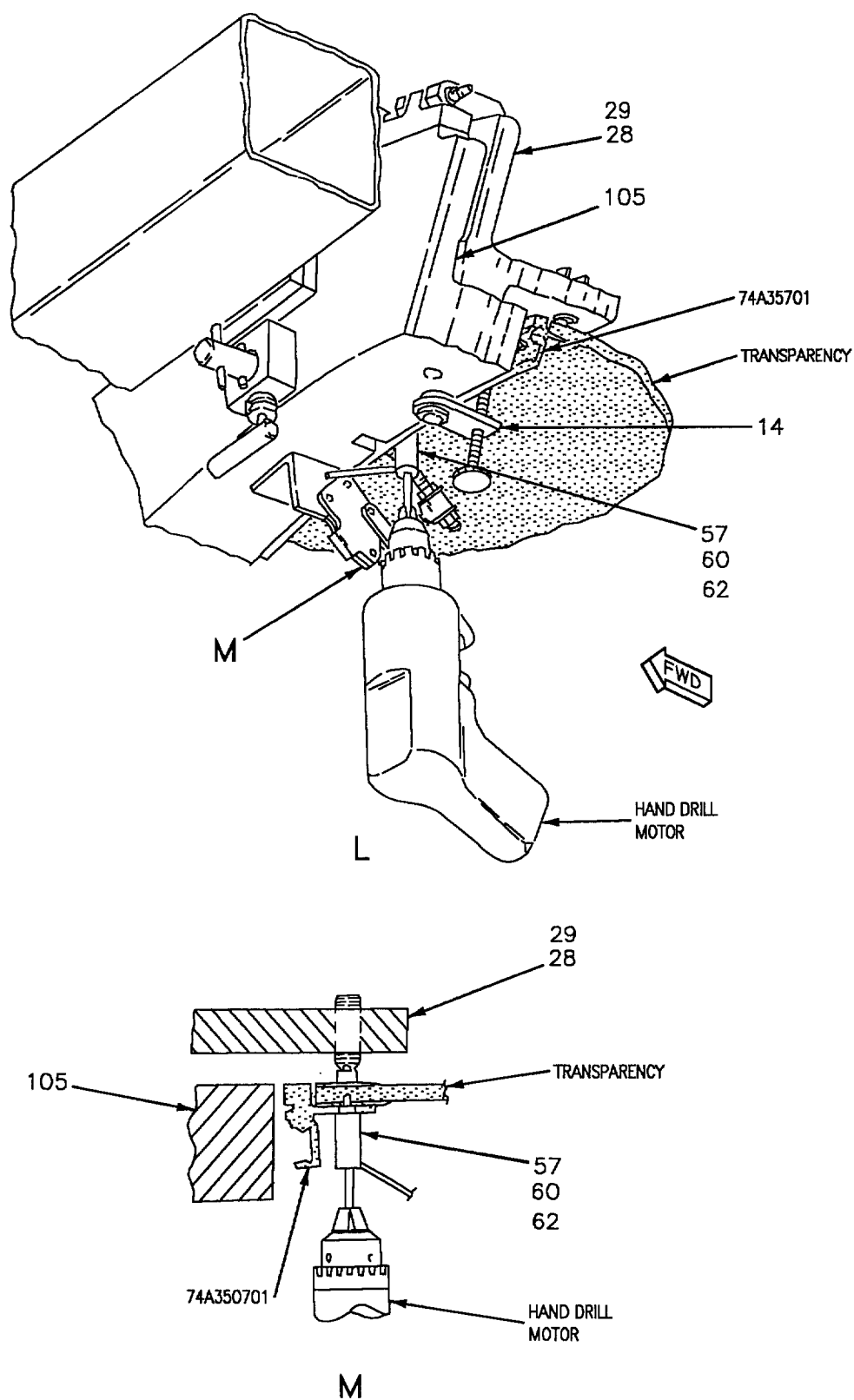


Figure 3. Damaged Transparency Replacement (Sheet 5)



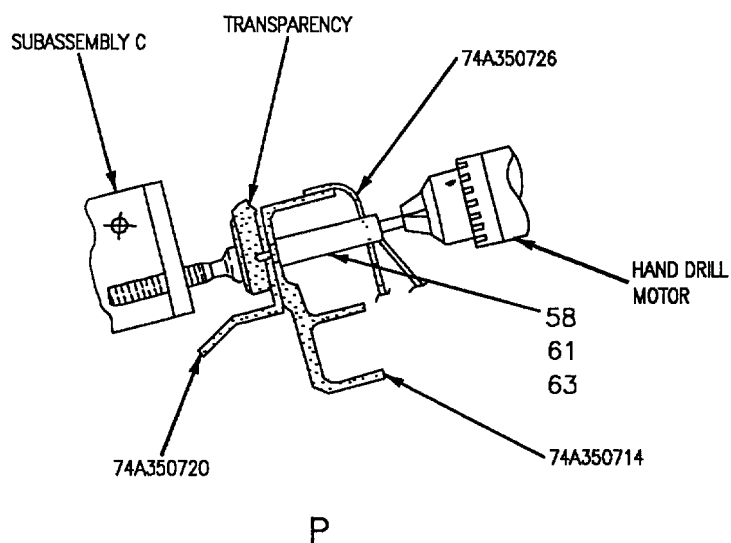
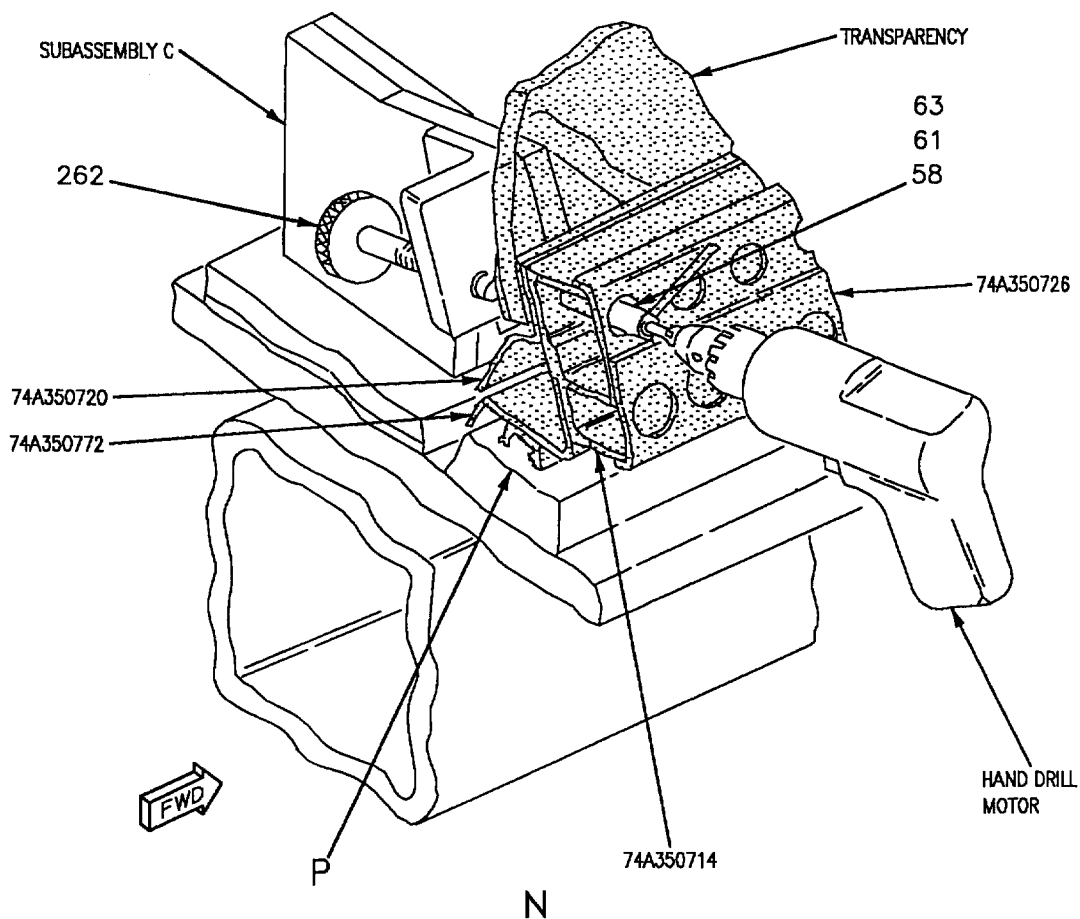


Figure 3. Damaged Transparency Replacement (Sheet 7)

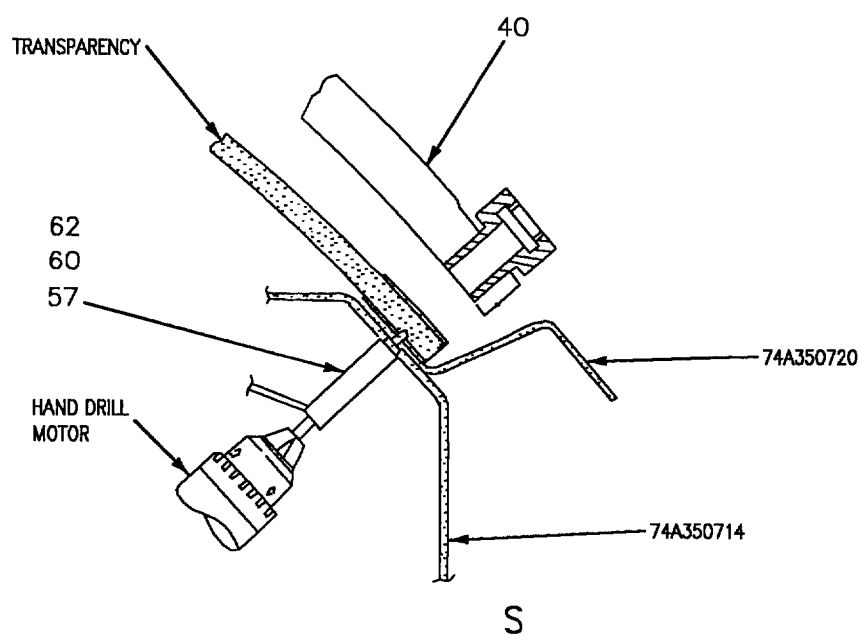
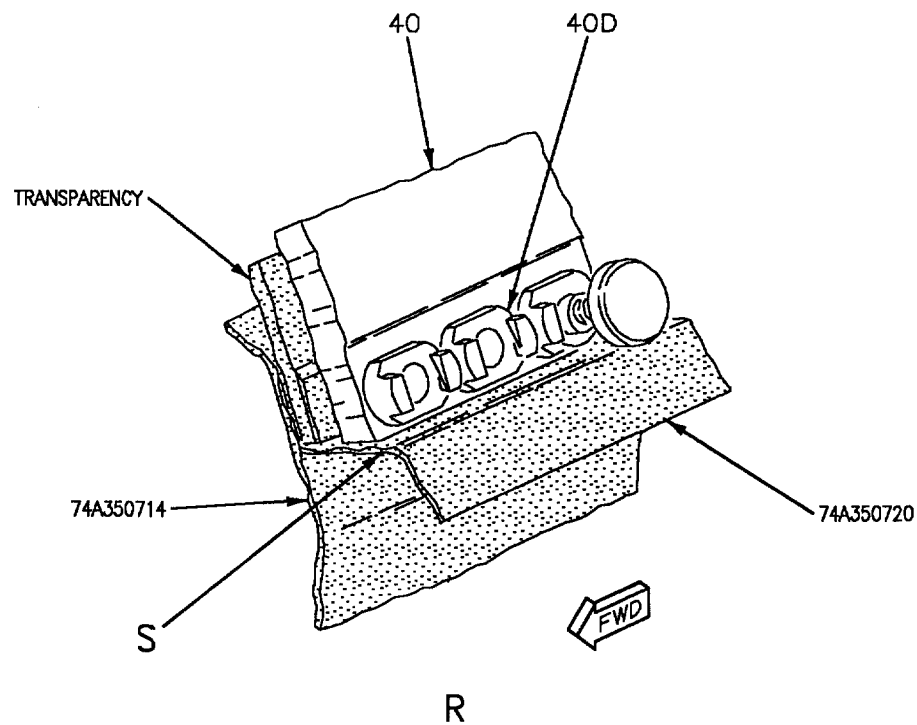


Figure 3. Damaged Transparency Replacement (Sheet 8)

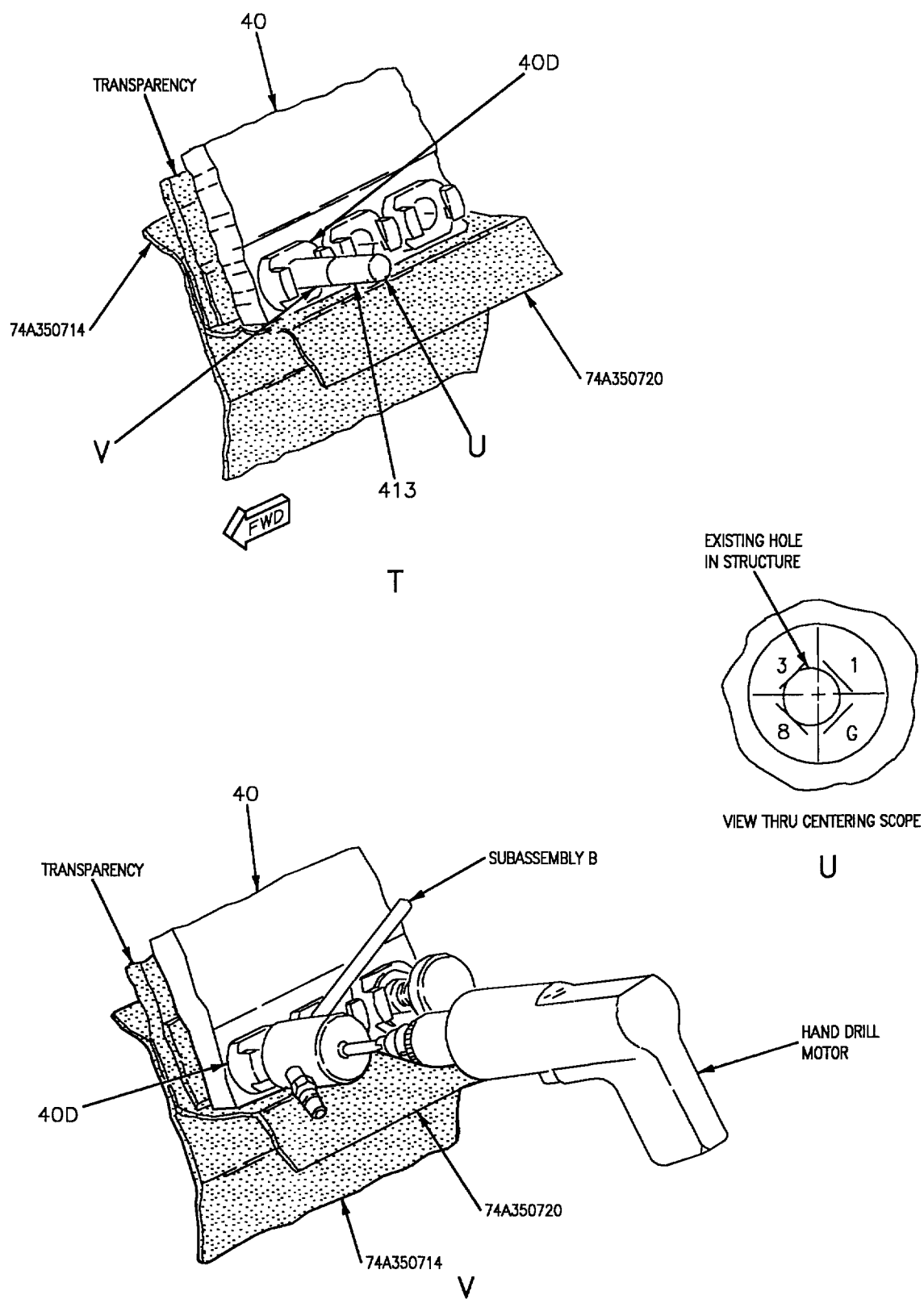


Figure 3. Damaged Transparency Replacement (Sheet 9)

DETAIL NO.	NAME	FUNCTION
Subassembly C and D	Clamp assembly	Clamps transparency to structure at side frame sections for drilling procedures.
Subassembly B	Traveler bushing	Drills 0.1285 inch diameter pilot hole in transparency.
13, 14	Clamp half	Assembles thru arch base (detail 105) to clamp transparency to structure at canopy arch for drilling procedures.
28, 29	Drill blanket	Locates transparency attachment holes at canopy arch for drilling procedures.
40	Drill blanket	Locates transparency attachment holes at aft end of side frame section and aft fairing for drilling procedures.
40D	Drill bushing	Part of drill blanket (detail 40). Locates transparency attachment holes and provides attachment for traveler bushings, drill motor nosepiece adapter, and thumbscrew and lock assemblies (details 305, 306).
57	Traveler bushing	Guides 0.1285 inch diameter drill in nominal size hole.
58	Traveler bushing	Guides 0.1285 inch diameter drill in nominal size hole.
60	Traveler bushing	Guides 0.1285 inch diameter drill in first oversize hole.
61	Traveler bushing	Guides 0.1285 inch diameter drill in first oversize hole.
62	Traveler bushing	Guides 0.1285 inch diameter drill in second oversize hole.
63	Traveler bushing	Guides 0.1285 inch diameter drill in second oversize hole.
105	Arch base	Contains various details for clamping, inspecting, and locating canopy arch 74A350701.
112	L-pin	Locates and secures drill blankets (details 28, 29) to arch base (detail 105).
113	L-pin	Locates drill blanket (detail 40) to maintenance fixture.
121	Drill blanket support	Provides aft attachment point for drill blanket (detail 40).
143, 144	Fixture base	Base of fixture to which locators mount.
147	T-pin	Locates and secures drill blankets (details 28, 29) to arch base (detail 105).
148	Thumbscrew	Part of clamp half (detail 14). Secures transparency to canopy arch.

Figure 3. Damaged Transparency Replacement (Sheet 10)

DETAIL NO.	NAME	FUNCTION
198	L-pin	Locates clamp assemblies (subassembly C and D) on maintenance fixture.
199	Handknob	Secures clamp assemblies (subassembly C and D) to maintenance fixture.
205	Handknob	Secures drill blanket (detail 40) to maintenance fixture.
262	Thumbscrew	Part of clamp assemblies (subassembly C and D). Secures transparency to side frame section.
270	Swivel foot screw	Part of drill blanket (detail 40). Secures transparency against structure for drilling procedures.
305, 306	Thumbscrew assembly	Attaches to drill bushing (detail 40) to secure transparency to structure for drilling procedure.
311	Swivel foot screw	Part of drill blanket (details 28, 29). Secures transparency to canopy arch for drilling procedures.
413	Centering scope	Used with drill blanket (detail 40) to determine hole size required to clean up holes not able to be back drilled.

Figure 3. Damaged Transparency Replacement (Sheet 11)

5. DRILLING NEW TRANSPARENCY AND STRUCTURE. See figure 4.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Accessory Kit, Drilling Machine	RE574000002-1
Aircraft Structure Repair Tool Kit	74D110325-1001
Drill Machine	74D110311-1001
Maintenance Fixture, Canopy	RE174350004-1
Repair Kit, Canopy	RE274350004-1
Repair Kit, Canopy	RE274350006-1
Tank Assembly, Coolant, Spray Mist	RE874000002-1

Materials Required

None

a. Make sure canopy is loaded correctly and secure (WP005 01).



To prevent damage to new transparency, make sure barrier material and ethyl foam cushioning material is installed.

b. Position new transparency on new canopy structure.

c. Assemble clamp half (details 13, 14) onto arch base (detail 105) eight places per steps below:

(1) Install clamp half (detail 13) from mold line side of arch base (detail 105), detail A.

(2) Install clamp half (detail 14) over clamp half (detail 13) and rotate to lock position, detail A.



Excessive pressure on transparency by thumbscrew (detail 148) can cause gouges, cracks, or distortion.

d. Tighten thumbscrew (detail 148) to secure transparency to canopy arch, detail B.

e. Install drill blanket (details 28, 29) onto arch base (detail 105) by inserting L-pin (detail 112) and T-pin (detail 147) eight places, detail C.



Excessive pressure on transparency by swivel foot screw (detail 311) can cause gouges, cracks, or distortion.

f. Adjust swivel foot screw (detail 311) against transparency nine places to hold transparency firmly against canopy structure, detail C.

g. Locate drill blanket (detail 40) as follows:

(1) Position forward end of drill blanket (detail 40) on fixture base (details 143, 144) by inserting L-pins (detail 113) two places and secure by installing handknob (detail 205) two places.

(2) Position aft end of drill blanket (detail 40) on drill blanket support (detail 121) by inserting L-pin (detail 113) four places and secure with handknob (detail 205) two places, detail F.



Excessive pressure on transparency by swivel foot screw (detail 270) can cause gouges, cracks, or distortion.

h. Adjust swivel foot screw (detail 270) against transparency ten places to hold transparency firmly against canopy structure, detail G.



Excessive pressure on transparency by thumbscrew assembly (detail 305, 306) can cause gouges, cracks, or distortion.

i. Install thumbscrew assembly (detail 305, 306) at eight evenly spaced places around drill blanket (detail 40) as follows:

(1) Insert thumbscrew (detail 305) into drill bushing (detail 40D), detail J.

(2) Rotate lock tab on thumbscrew (detail 306) in drill bushing (detail 40D), detail J.

(3) Tighten thumbscrew (detail 305) to secure transparency to canopy structure.

j. Position clamp assembly (subassembly C, D) on fixture base (details 143, 144) by inserting L-pin (detail 198) four places and secure by installing handknob (detail 199) six places.



Excessive pressure on transparency by thumbscrew (detail 262) can cause gouges, cracks, or distortion.

k. Tighten thumbscrew (detail 262) 16 places to secure transparency to canopy structure.

l. Rotate drill blanket (details 22, 23, 24, 25) into position and secure by installing L-pin (detail 369), typical eight places, detail L.

m. At hole location 1 through 22, 70 through 120, and 168 through 188:

(1) Install traveler bushing (subassembly B) with coolant adapter and quick disconnect coolant line into drill bushing (details 28C, 29C, and 40D), detail M and R.

(2) Drill 0.1285 inch diameter pilot hole in transparency and canopy structure.

(3) Insert step pin (detail 388) through drill bushing (details 28C, 29C, and 40D) into pilot holes to maintain correct alignment of transparency, details N and S.

(4) Drill pilot holes in transparency and canopy structure to 0.195 +0.007 -0.000 inch nominal size using 74D110311-1001 drill machine and RE574000002-1 coolant bushing and nose piece, details P and T.

(5) Insert step pin (detail 389) through drill bushing (details 28C, 29C, and 40D) into nominal size holes to maintain correct alignment of transparency, detail N and S.

n. At hole location 23 through 69 and 121 through 167:

(1) Install traveler bushing (subassembly F) with coolant adapter and quick disconnect coolant line into drill bushing (detail 272), detail U.

(2) Drill 0.1285 inch diameter pilot hole in transparency and canopy structure.

(3) Insert step pin (detail 388) through drill bushing (detail 272) into pilot holes to maintain correct alignment of transparency, detail V.

(4) Drill pilot holes in transparency and canopy structure to 0.195 +0.007 -0.000 inch nominal size, detail W.

(5) Insert step pin (detail 389) through drill bushing (detail 272) into nominal size holes to maintain correct alignment of transparency, detail V.

o. Remove drill blanket (details 28, 29, 40), clamp assembly (subassemblies C, D), clamp half (details 13, 14), and drill blanket (details 22, 23, 24, 25).

p. Remove transparency from canopy structure and place in suitable holding fixture.

q. Countersink hole on mold line side of transparency to flushness requirement of fastener.

r. Visually inspect each hole for flaws. Repair holes containing any of the following conditions:

(1) Cracks or laminar splits.

(2) Frosted crazed surface typical of condition resulting from drill flutes packed with chips. These holes will usually be oversize.

s. The following conditions may be visible but are not rejectable flaws:

(1) Helical rub marks from drill withdrawal which have no measurable depth.

(2) Countersink pilot rub marks which have no measurable depth.

(3) Minor surface crazing that covers less than one third of the hole surface.

t. Install new transparency on canopy structure per paragraph 3, this WP.

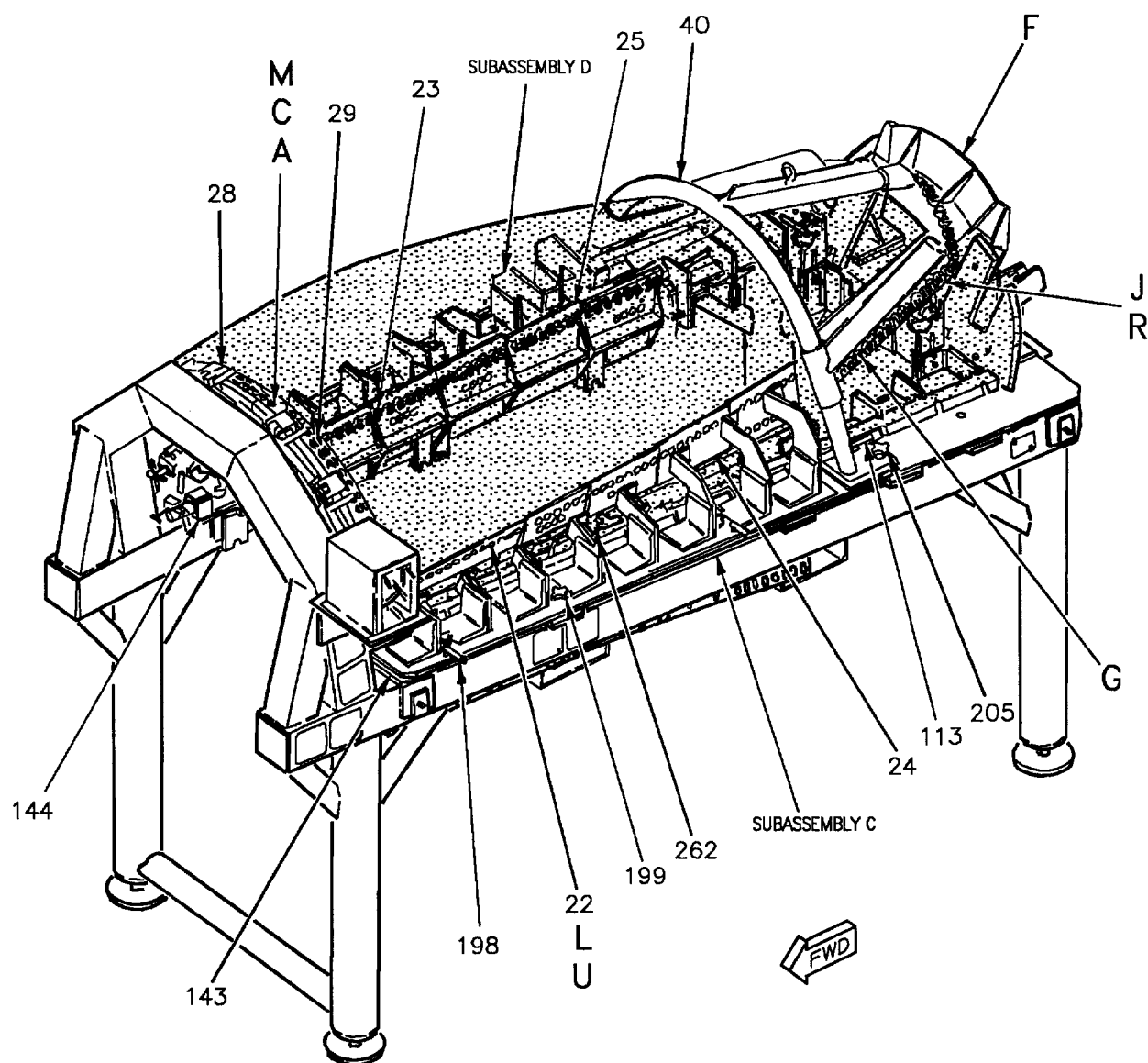


Figure 4. Drilling New Transparency and Structure (Sheet 1)

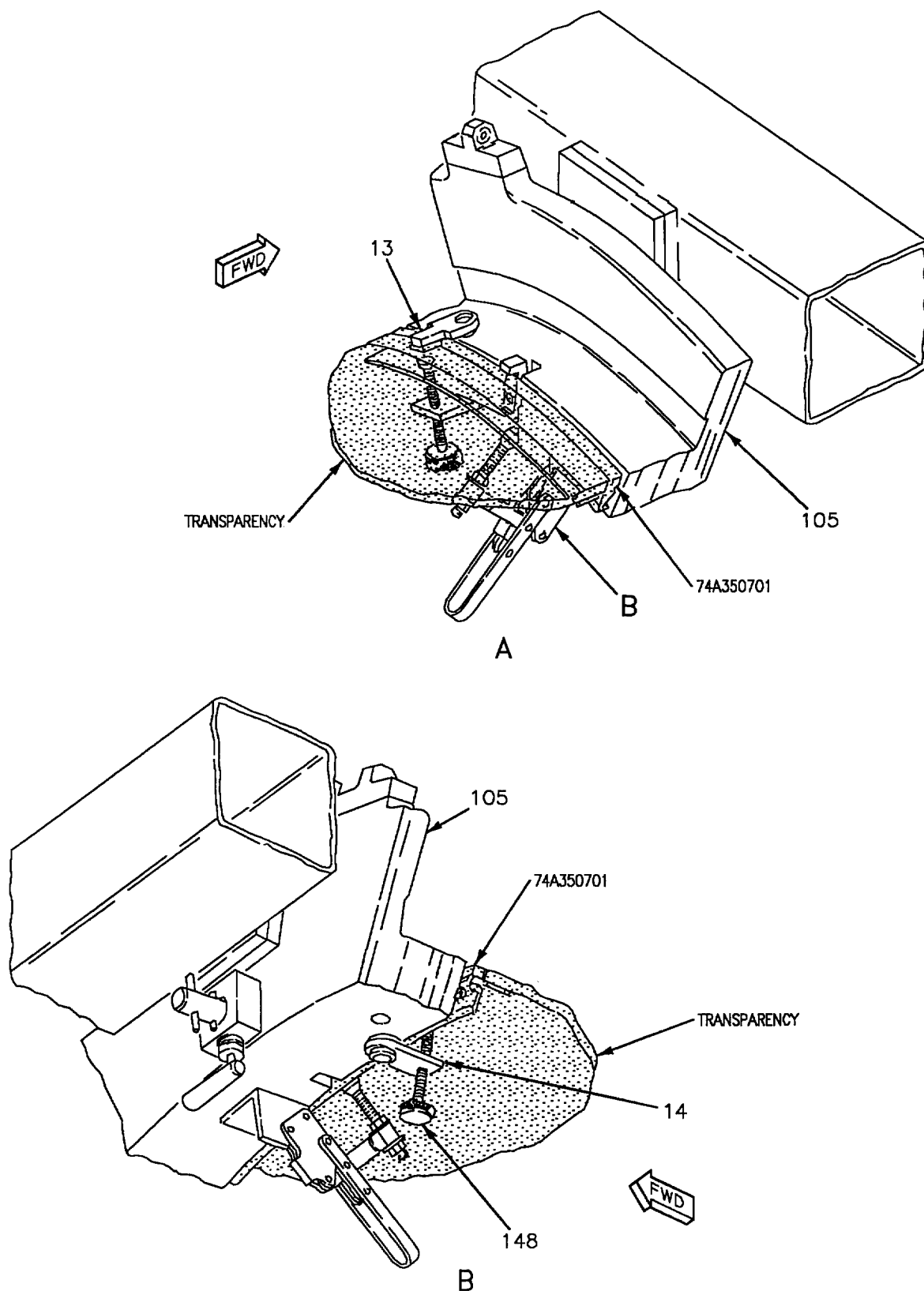


Figure 4. Drilling New Transparency and Structure (Sheet 2)

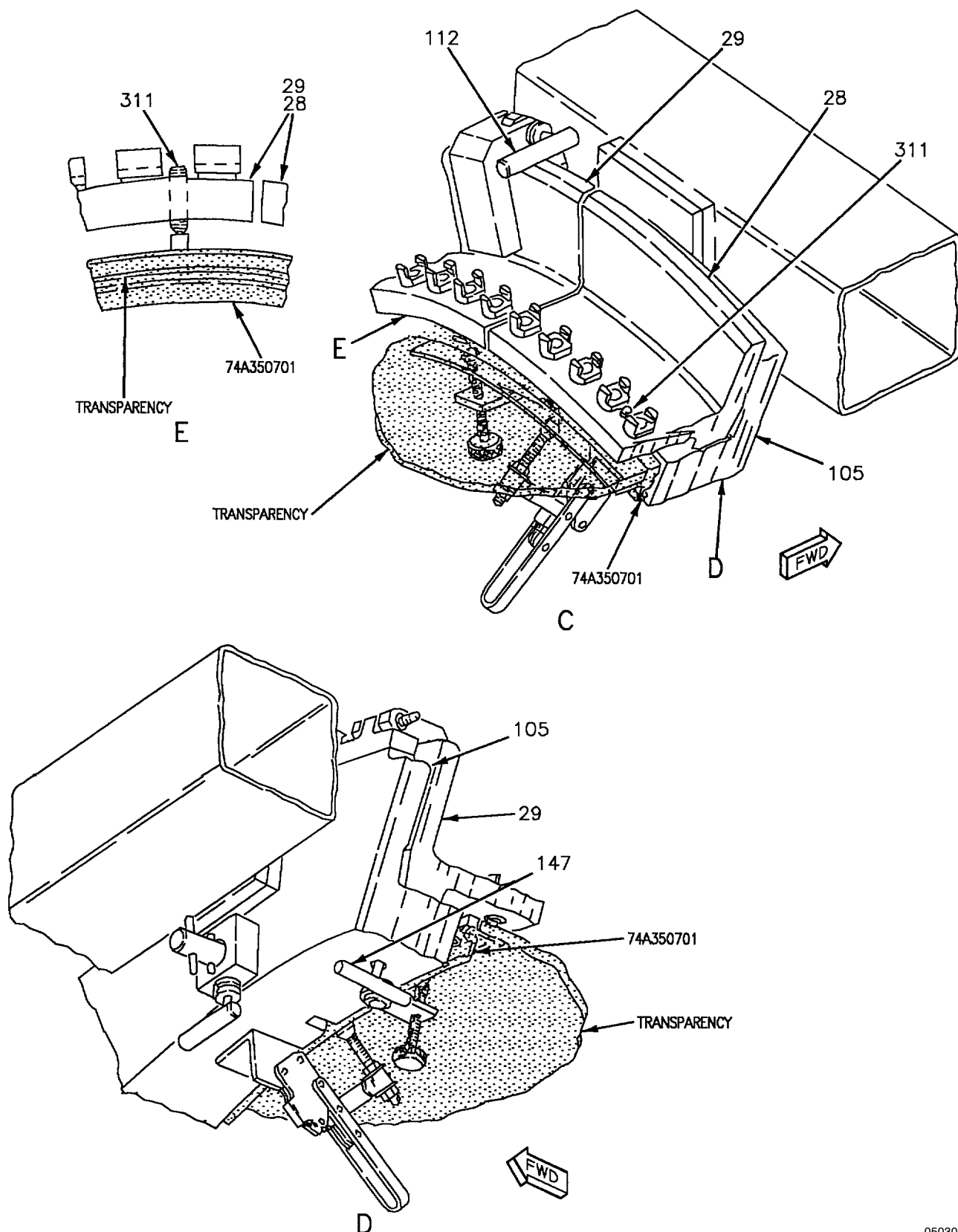


Figure 4. Drilling New Transparency and Structure (Sheet 3)

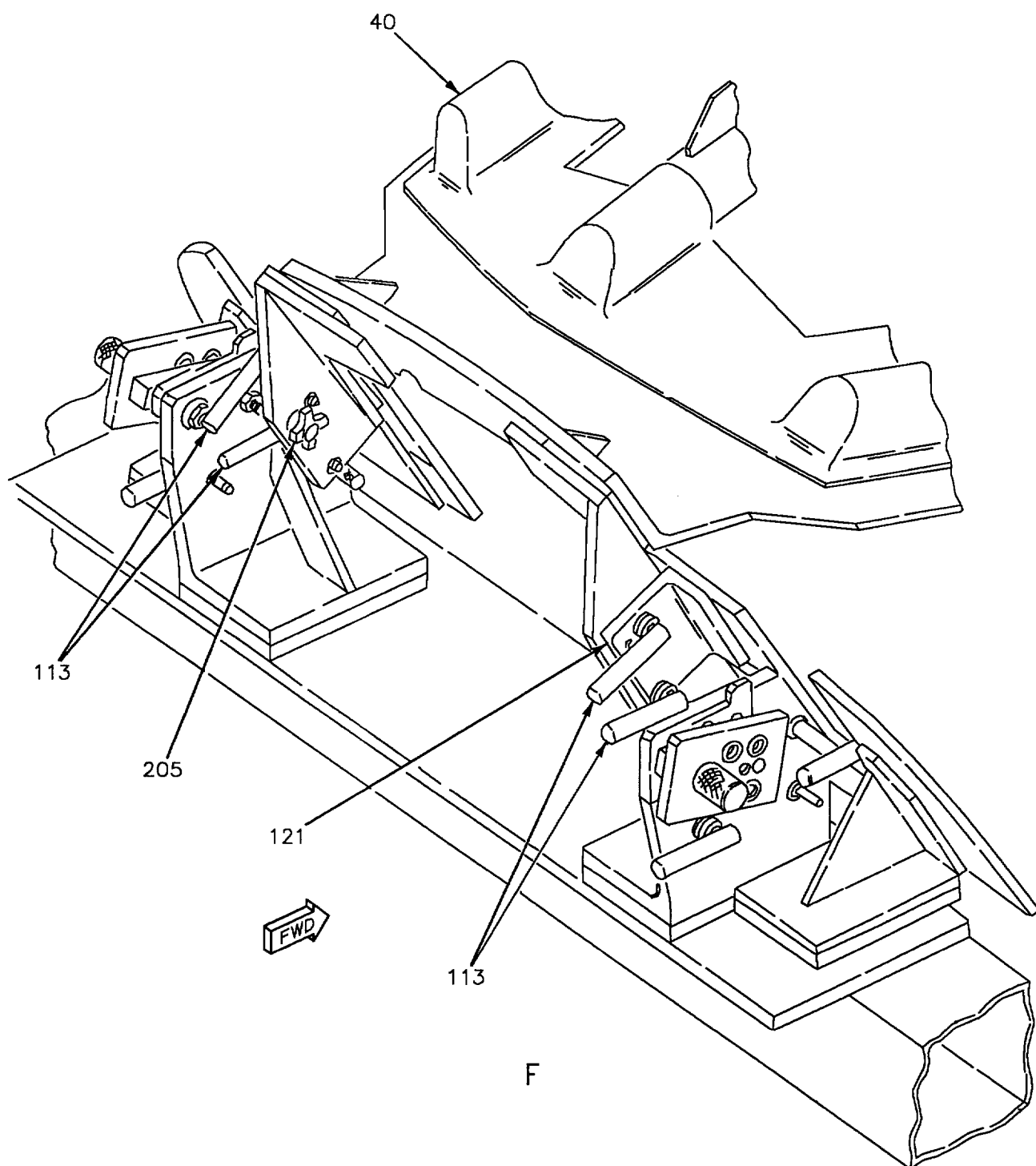


Figure 4. Drilling New Transparency and Structure (Sheet 4)

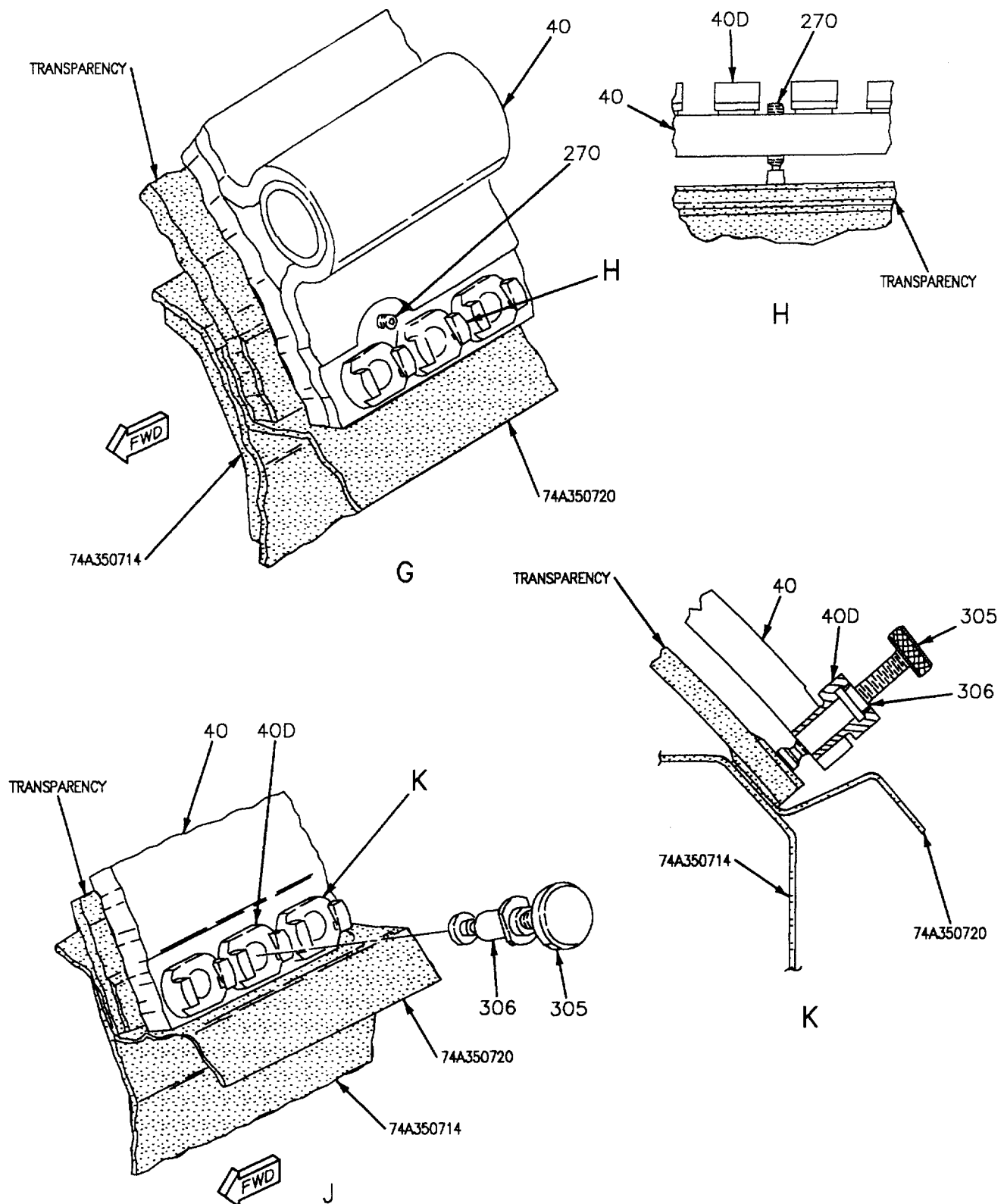


Figure 4. Drilling New Transparency and Structure (Sheet 5)

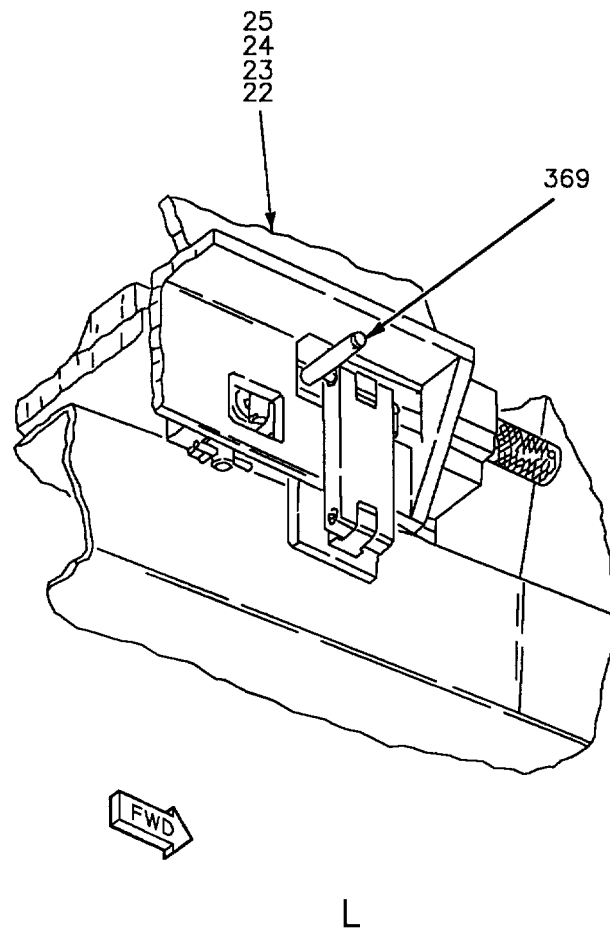


Figure 4. Drilling New Transparency and Structure (Sheet 6)

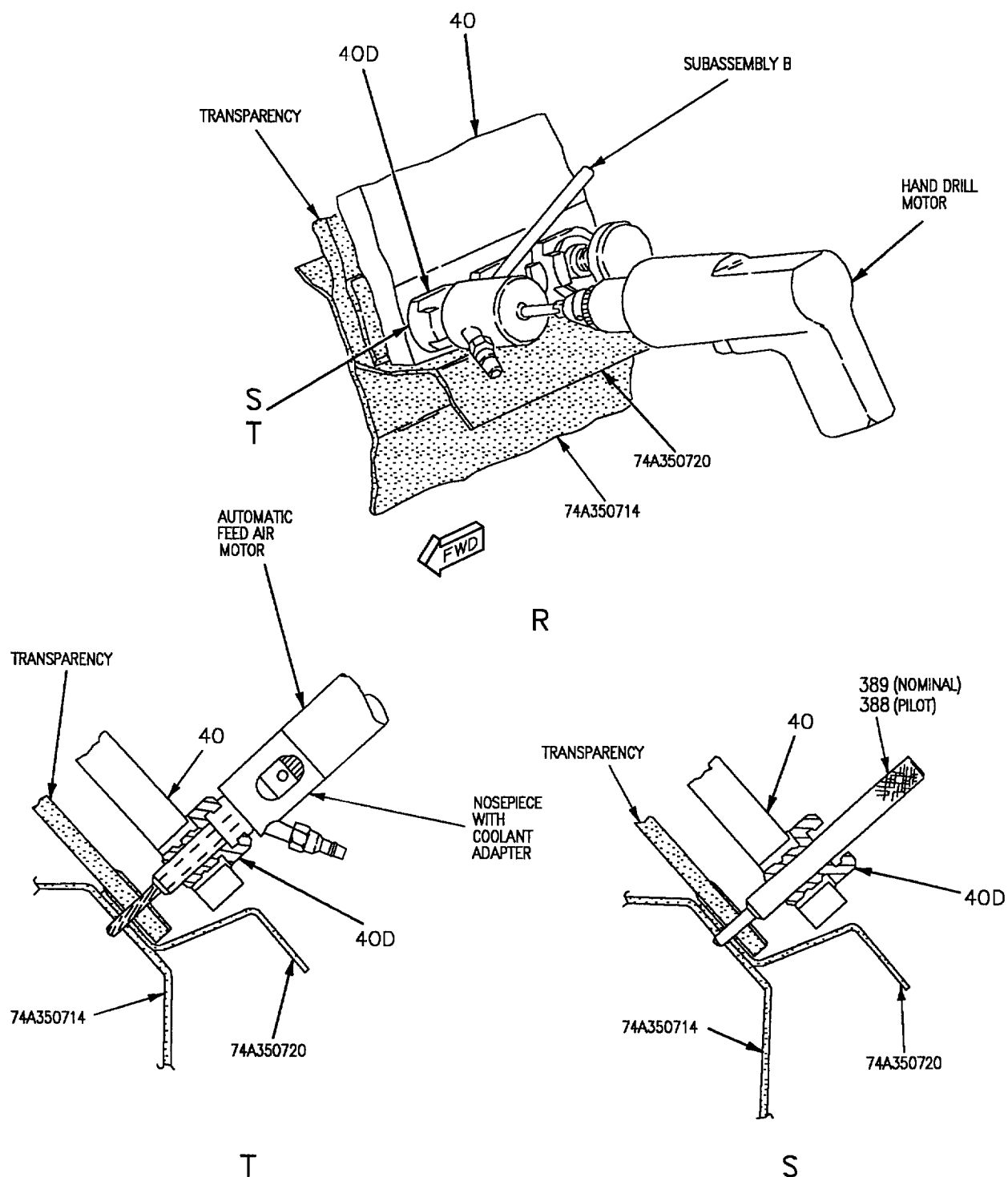
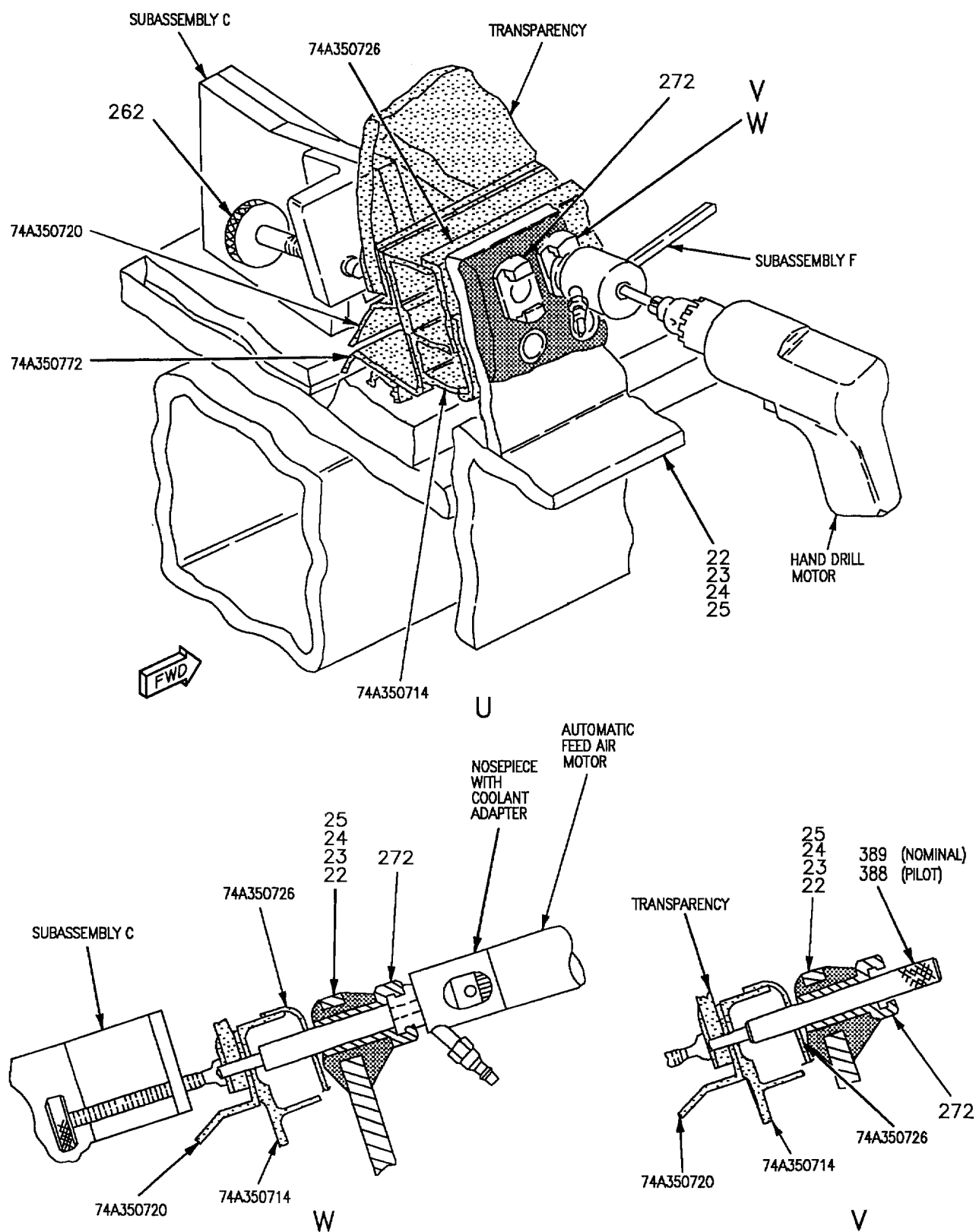


Figure 4. Drilling New Transparency and Structure (Sheet 8)



DETAIL NO.	NAME	FUNCTION
Subassembly B	Traveler bushing	Drills 0.1285 inch diameter pilot hole in transparency and canopy structure using drill bushing (details 28C, 29C, and 40D).
Subassembly C and D	Clamp assembly	Clamps transparency to structure at side frame sections for drilling procedures.
Subassembly F	Traveler bushing	Drills 0.1285 inch diameter pilot hole in transparency and canopy structure using drill bushing (detail 272).
13, 14	Clamp half	Assembles thru arch base (detail 105) to clamp transparency to structure at canopy arch for drilling procedures.
22, 23, 24, 25	Drill blanket	Locates transparency attachment holes at forward half of side frame section for drilling procedures.
28, 29	Drill blanket	Locates transparency attachment holes at canopy arch for drilling procedures.
28C, 29C	Drill bushing	Locates transparency attachment holes and provides attachment for traveler bushings and drill motor nosepiece adapter.
40	Drill blanket	Locates transparency attachment holes at aft end of side frame section and aft fairing for drilling procedures.
40D	Drill bushing	Part of drill blanket (detail 40). Locates transparency attachment holes and provides attachment for traveler bushings, drill motor nosepiece adapter, and thumbscrew and lock assemblies (details 305, 306).
105	Arch base	Contains various details for clamping, inspecting, and locating canopy arch 74A350701.
112	L-pin	Locates and secures drill blanket (details 28, 29) to arch base (detail 105).
113	L-pin	Locates drill blanket (detail 40) to maintenance fixture.
121	Drill blanket support	Provides aft attachment point for drill blanket (detail 40).
143, 144	Fixture base	Base of fixture to which locators mount.
147	T-pin	Locates and secures drill blanket (details 28, 29) to arch base (detail 105).
148	Thumbscrew	Part of clamp half (detail 14). Secures transparency to canopy arch.

Figure 4. Drilling New Transparency and Structure (Sheet 10)

DETAIL NO.	NAME	FUNCTION
198	L-pin	Locates clamp assemblies (subassembly C and D) on maintenance fixture.
199	Handknob	Secures clamp assemblies (subassembly C and D) to maintenance fixture.
205	Handknob	Secures drill blanket (detail 40) to maintenance fixture.
262	Thumbscrew	Part of clamp assemblies (subassembly C and D). Secures transparency to side frame section.
270	Swivel foot screw	Part of drill blanket (detail 40). Secures transparency against structure for drilling procedures.
272	Drill bushing	Part of drill blanket (details 22, 23, 24, 25). Locates transparency attachment holes and provides attachment for traveler bushings and drill motor nosepiece adapter.
305, 306	Thumbscrew assembly	Attaches to drill bushing (detail 40) to secure transparency to structure for drilling procedure.
311	Swivel foot screw	Part of drill blanket (details 28, 29). Secures transparency to canopy arch for drilling procedures.
369	L-pin	Secures drill blanket (detail 22, 23, 24, 25) in upper position for drilling procedures.
388	Step pin (pilot)	Used to maintain correct alignment between transparency, structure, and drill blankets while drilling pilot holes.
389	Step pin (nominal)	Used to maintain correct alignment between transparency, structure, and drill blankets while drilling full size holes.

Figure 4. Drilling New Transparency and Structure (Sheet 11)

ORGANIZATIONAL MAINTENANCE**STRUCTURE REPAIR****CANOPY - F/A-18B**

Reference Material

Forward Fuselage External Numbered Metal Doors	WP032 00
Forward Fuselage External Numbered Metal Doors, Replacement	WP033 00
F/A-18B Canopy Component Replacement	WP006 02
Aircraft Corrosion Control	A1-F18AC-SRM-500
Windshield, Canopy, and Cockpit Finish System	WP021 00
Plane Captain Manual	A1-F18AC-PCM-000
Structure Repair, General Information	A1-F18AC-SRM-200
Introduction	WP002 00
Adhesive, Cement, and Sealant; Preparation and Application	WP011 00
Structure Repair, Typical Repair	A1-F18AC-SRM-250
Aluminum Sheet, Free of Structure and Land Areas	WP031 00
Titanium Sheet, Free of Structure and Land Areas	WP032 00
Aluminum and Titanium Sheet, Formed Structure	WP033 00
Aluminum Sheet Edge Repair	WP034 00
Titanium Sheet Edge Repair	WP035 00
Aluminum Sheet Repairs, Across Structure and Lands	WP036 00
Titanium Sheet Repairs, Across Structure and Lands	WP037 00
Blending	WP038 00
Aircraft Weapons Systems Cleaning and Corrosion Control	NAVAIR 01-1A-509
Universal Optical Micrometer Kit	T.O. 33B4-2-10-1

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Acrylic Transparency Polish	11
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Canopy Deck, 74A350834, Adaption	4
Damage Evaluation	2
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Record of Applicable Technical Directives

None

1. **STRUCTURE.****NOTE**

2. **DAMAGE EVALUATION.** See figures 1 and 2. Damage is classified as negligible and repairable. Locating and determining size of damage by visual method is organizational maintenance. The types of materials used are shown on figure 1. Repair zones are shown on figure 2. Allowable damage limits within repair zones are listed in tables 1 and 2. Damage not listed or exceeding the following limits require a depot engineering disposition.

3. **Negligible Damage.** Negligible damage is damage that may be allowed to exist as is. However, preventive maintenance, for temporary corrosion arrestment, should be done to scratches (NAVAIR 01-1A-509). The types and limits of damage are listed below and in table 1. The figure and index numbers in table 1 coincide with the figure and index numbers in the material index.

a. Scratches are not allowed within one diameter from the edge of any hole.

b. Smooth dents only, effective diameter at least 20 times the depth.

4. **Repairable Damage.** The types and limits of damage are listed below and in table 2. The figure and index numbers in table 2 coincide with figure and index numbers in the material index, figure 1.

The limits in table 2 apply after blending the damage.

a. Scratches.

(1) Scratches within one diameter of any hole must be blended out. Minimum blend out is one diameter from edge of any hole.

(2) Scratches to be blended out with diameter, or width, at surface at least 20 times the depth.

b. Nicks, gouges, and corrosion to be blended out with diameter, or width, at surface at least 20 times the depth.

c. Cracks. All cracks must be repaired.

d. Holes.

(1) Damage in areas free of structure and lands must have edge of cleanup hole at least eight repair fasteners diameters from any land, internal structure, or existing row of fasteners.

(2) Damage to lands, over structure, only one repair per land.

e. Dents exceeding the limits in table 1 must be repaired.

5. **REPAIRS.** Types of repairs are temporary, one-time flight, permanent, critical area, alternate, and typical. Repair type definition are in structure repair terms (A1-F18AC-SRM-200, WP002 00).

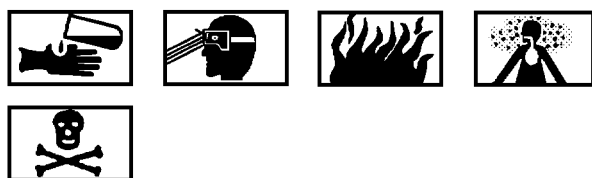
6. Permanent Repairs.**Support Equipment Required**

None

Materials Required

Nomenclature	Specification or Part Number
--------------	---------------------------------

Lubricant, Dry Film	MIL-L-46147, Type 2
---------------------	------------------------



Dry Film Lubricant	25
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7. Scratches, Nicks, Gouges, or Corrosion. Blend scratches, nicks, gouges, or corrosion (A1-F18AC-SRM-250, WP038 00). If after blending, the damage limits of table 2 are exceeded, repair aluminum or titanium sheet as below. Refinish blended areas (A1-F18AC-SRM-500, WP021 00). Spray dry film lubricant on mouth of hinge (39) if repaired by blending.

a. Scratches - make crack or edge repairs.

b. Nicks, gouges, or corrosion - make hole or edge repair.

8. Cracks.

a. In repair zones A3 and A4, repair cracks free of structure or land areas in aluminum sheet (A1-F18AC-SRM-250, WP031 00) or titanium sheet (A1-F18AC-SRM-250, WP032 00).

(1) Rout out crack in zone A3. Completely cut out damage in smallest diameter circle possible in zone A4.

(2) Install lap patch in zone A3.

(3) Install a type two flush or lap patch in zone A4.

(4) Refinish repaired area (A1-F18AC-SRM-500, WP021 00).

b. In repair zones A3 or A4, repair cracks across structure or land areas in aluminum sheet (A1-F18AC-SRM-250, WP036 00) or titanium sheet (A1-F18AC-SRM-250, WP037 00).

(1) Cut out damage.

(2) Make repairs.

(a) Damage to Bay Requiring Repair Across Land; install flush or lap patch.

(b) Damage to Bay Requiring Repair Across Land and Edge of Part; install flush or lap patch.

(c) Damage to Land or Land and Bay; install flush or lap patch.

(3) Refinish repaired area (A1-F18AC-SRM-500, WP021 00).

c. In repair zones A3 and A4, repair cracks to aluminum or titanium formed structure (A1-F18AC-SRM-250, WP033 00).

(1) Cut out damage.

(2) Install repair one through six. Select the repair that can be adapted to the damaged part.

(3) Refinish repaired area (A1-F18AC-SRM-500, WP021 00).

9. Holes.

a. In repair zones A3 or A4, repair holes free of structure or land areas in aluminum sheet (A1-F18AC-SRM-250, WP031 00) or titanium sheet (A1-F18AC-SRM-250, WP032 00).

(1) Cut out damage.

(2) Install a type one flush or lap patch in zone A3.

(3) Install a type two flush or lap patch in zone A4.

(4) Refinish repaired area (A1-F18AC-SRM-500, WP021 00).

b. In repair zones A3 or A4, repair holes across structure or land areas in aluminum sheet (A1-F18AC-SRM-250, WP036 00) or titanium sheet (A1-F18AC-SRM-250, WP037 00).

(1) Cut out damage.

(2) Make repairs.

(a) Damage to Bay Requiring Repair Across Land; install flush or lap patch.

(b) Damage to Bay Requiring Repair Across Land and Edge or Part; install flush or lap patch.

(c) Damage to Land or Land and Bay; install flush or lap patch.

(3) Refinish repaired area (A1-F18AC-SRM-500, WP021 00).

10. **Edge.** In repair zones A3 or A4, repair edge damage in aluminum sheet (A1-F18AC-SRM-250, WP034 00) or titanium sheet (A1-F18AC-SRM-250, WP035 00)

a. Cut out damage.

b. Select and install repair patch.

(1) Corner damage to lands.

(2) Corner damage to lands and bays.

(3) Edge damage to lands.

(4) Edge damage to lands and bays.

(5) Full width damage to end.

c. Refinish repaired area (A1-F18AC-SRM-500, WP021 00).

11. **Dents.**

a. In repair zones A3 and A4, repair dents free of structure or land areas in aluminum sheet (A1-F18AC-SRM-250, WP031 00) or titanium sheet (A1-F18AC-SRM-250, WP032 00).

(1) Cut out damage.

(2) Install a type one flush or lap patch in zone A3.

(3) Install a type two flush or lap patch in zone A4.

(4) Refinish repaired area (A1-F18AC-SRM-500, WP021 00).

b. In repair zones A3 and A4, repair dents across structure or land areas in aluminum sheet (A1-F18AC-SRM-250, WP036 00) or titanium sheet (A1-F18AC-SRM-250, WP037 00).

(1) Cut out damage.

(2) Make repairs.

(a) Damage to Bay Requiring Repair Across Land; install flush lap patch.

(b) Damage to Bay Requiring Repair Across Land and Edge of Part; install flush or lap patch.

(c) Damage to Land or Land and Bay; install flush or lap patch.

(3) Refinish repaired area (A1-F18AC-SRM-500, WP021 00).

c. In repair zones A3 and A4, repair dents to aluminum or titanium formed structure (A1-F18AC-SRM-250, WP033 00).

(1) Cut out damage.

(2) Install repair one through six. Select the repair that can be adapted to the damaged part.

(3) Refinish repaired area (A1-F18AC-SRM-500, WP021 00).

12. **REPLACEMENT.** For canopy structural component replacement, (WP006 02).

13. **CANOPY DECK, 74A350834, ADAPTION.** This procedure adapts old configuration canopy assemblies to new configuration. Certain replacement assemblies may require bushing to install wire bundle. Manufacture of bushing is intermediate level maintenance. See figure 3.

Support Equipment Required

None

Materials Required

Nomenclature	Specification or Part Number
Sealing Compound	MIL-S-83430, Class A-1/2

a. Manufacture bushing and washer.

b. Apply chemical conversion surface treatment. For chemical treatment (A1-F18AC-SRM-500, WP008 00).

c. Wet install bushing and washer with sealing compound.



Sealing Compound

7

Table 1. Negligible Damage Limits

Fig No Idx No	Nomen/ Repair Zone	Thickness	Scratch Depth	Nicks Gouges		Dents Depth	Rivet Tilt
				Depth	Area		
Fig 1 (1)	Arch Zone A4	All areas	0.0006	0.0006	100%		
Fig 1 (10)	Angle Zone A3	0.032	0.002	0.002	100%	0.016	N/A
Fig 1 (12)	Angle Zone A3	0.032	0.002	0.002	100%	0.016	N/A
Fig 1 (14)	Intercostal Zone A3	0.032	0.002	0.002	100%	0.016	N/A
Fig 1 (21)	Latch Zone A4	All areas	0.025	0.0006	100%		N/A
Fig 1 (22)	Sill Zone A3	0.040	0.0006	0.0006	100%	0.020	5%
Fig 1 (23)	Fairing Zone A3	0.040	0.002	0.002	100%	0.020	5%
		0.071	0.002	0.002	100%	0.035	5%
Fig 1 (28)	Beam Zone A4	All areas	0.0006	0.0006	100%		N/A
Fig 1 (29)	Plate Zone A4	0.100	0.0006	0.0006	100%		N/A
Fig 1(33)	Fairing Zone A3	0.063	0.002	0.002	100%	0.031	10%
Fig 1 (34)	Fitting Zone B4 Zone C4	All areas	0.0006	0.0006	100%		N/A
		All areas	0.0006	0.0006	100%		N/A
Fig 1 (36)	Bulkhead Zone A4	0.040	0.0006	0.0006	100%	0.020	N/A
	Angle Zone A4	0.050	0.0006	0.0006	100%	0.025	N/A

Table 1. Negligible Damage Limits (Continued)









Fig No Idx No	Nomen/ Repair Zone	Thickness	Scratch Depth	Nicks Gouges		Dents Depth	Rivet Tilt
				Depth	Area		
Fig 1 (37)	Plate Zone A4	0.100	0.0006	0.0006	100%	0.05	N/A
Fig 1 (38)	Hinge Zone A4	All areas	0.0006	0.0006	100%		N/A
Fig 1 (39)	Frame Zone A4	All areas	 0.0006	0.0006	100%	0.035	N/A
	Zone B4	All areas	0.0006	0.0006	100%		N/A
Fig 1 (40)	Angle Zone A3	0.032	0.002	0.002	100%	0.016	N/A
Fig 1 (43)	Angle Zone A3	0.032	0.002	0.002	100%	0.016	N/A
Fig 1 (44)	Angle Zone A3	0.032	0.002	0.002	100%	0.016	N/A
Fig 1 (46)	Angle Zone A3	0.032	0.002	0.002	100%	0.016	N/A
Fig 1 (48)	Angle Zone A3	0.032	0.002	0.002	100%	0.016	N/A
Fig 1 (49)	Angle Zone A3	0.032	0.002	0.002	100%	0.016	N/A
Fig 1 (50)	Angle Zone A3	0.032	0.002	0.002	100%	0.016	N/A
Fig 1 (52)	Angle Zone A3	0.032	0.002	0.002	100%	0.016	N/A
Fig 1 (54)	Fairing Zone A3	0.040	0.002	0.002	100%	0.020	5%
		0.071	0.002	0.002	100%	0.035	5%
Fig 1 (63)	Latch Zone B4	All areas	0.0006	0.0006	100%		N/A
Fig 1 (66) 	Beam Zone A4	All areas	0.0006	0.0006	100%	0.04	 N/A
Fig 1 (70)	Latch Zone B4	All areas	0.0006	0.0006	100%		N/A
Fig 1 (75) 	Angle Zone A4	0.040	0.0006	0.0006	100%	0.020	N/A







Table 1. Negligible Damage Limits (Continued)

Fig No Idx No	Nomen/ Repair Zone	Thickness	Scratch Depth	Nicks Gouges		Dents Depth	Rivet Tilt
				Depth	Area		
Fig 1 (86)	Plate Zone A4	0.090	0.0006	0.0006	100%	0.045	N/A
Fig 1 (88)	Plate Zone A4	0.090	0.0006	0.0006	100%	0.045	N/A
Fig 1 (91) 3	Angle Zone A4	0.040	0.0006	0.0006	100%	0.020	N/A
Fig 1 (92)	Cam Zone B4	All areas	0.0006	0.0006	100%	6	N/A
<p align="center">NOTES</p> <p>1 Inspect substructure for damage.</p> <p>2 Dents not allowed in area of bend radii.</p> <p>3 Scratches not permitted within one diameter of hole cutouts of 0.75 diameter.</p> <p>4 Dents not allowed on flanges.</p> <p>5 Except as noted in figure 2.</p> <p>6 None allowed.</p>							

Table 2. Repairable Damage Limits After Blending

Fig No Idx No	Nomen/ Repair Zone	Thickness	Scratch Depth	Nicks Gouges		Corrosion	
				Depth	Area	Depth	Area
Fig 1 (1)	Arch Zone A4	All areas	0.016	0.016	15%	0.016	15%
Fig 1 (10)	Angle Zone A3	0.032	0.006	0.006	15%	0.006	15%
Fig 1 (12)	Angle Zone A3	0.032	0.006	0.006	15%	0.006	15%
Fig 1 (14)	Intercostal Zone A3	0.032	0.006	0.006	15%	0.006	15%
Fig 1 (21)	Latch Zone A4	All areas	0.025	0.025	15%	0.025	15%
Fig 1 (22)	Sill Zone A3	0.040	0.008	0.008	15%	0.008	15%

Table 2. Repairable Damage Limits After Blending (Continued)

Fig No Idx No	Nomen/ Repair Zone	Thickness	Scratch Depth	Nicks Gouges		Corrosion	
				Depth	Area	Depth	Area
Fig 1 (23)	Fairing Zone A3	0.040 0.071	0.008 0.014	0.008 0.014	15% 15%	0.008 0.014	15% 15%
Fig 1 (28) 	Beam Zone A4	0.065 0.100	0.013 0.020	0.013 0.020	10% 10%	0.013 0.020	10% 10%
Fig 1 (29)	Plate Zone A4	0.100	0.020	0.020	10%	0.020	10%
Fig 1 (33)	Fairing Zone A3	0.063	0.012	0.012	15%	0.012	15%
Fig 1 (34)	Fitting Zone B4 Zone C4	All areas All areas	0.02 	0.02 	5% 	0.02 	5% 
Fig 1 (36)	Bulkhead Zone A4 Angle Zone A4	0.040 0.050	0.008 0.010	0.008 0.010	15% 15%	0.008 0.010	15% 15%
Fig 1 (37)	Plate Zone A4	0.100	0.020	0.020	10%	0.020	10%
Fig 1 (38)	Hinge Zone A4	Mouth All areas except mouth	0.030 0.016	0.030 0.016	15% 15%	0.030 0.016	15% 15%
Fig 1 (39)	Frame Zone A4 Zone B4	All areas All areas	0.014 0.014	0.014 0.014	10% 5%	0.014 0.014	10% 5%
Fig 1 (40)	Angle Zone A3	0.032	0.006	0.006	15%	0.006	15%
Fig 1 (43)	Angle Zone A3	0.032	0.006	0.006	15%	0.006	15%
Fig 1 (44)	Angle Zone A3	0.032	0.006	0.006	15%	0.006	15%
Fig 1 (46)	Angle Zone A3	0.032	0.006	0.006	15%	0.006	15%

14. **ACRYLIC TRANSPARENCY.****NOTE**

Before evaluating damage, make sure transparency is thoroughly cleaned (A1-F18AC-PCM-000).

15. **DAMAGE EVALUATION.** Damage is classified as negligible and repairable. Damage criteria is applicable to inner and outer surface of transparency. To determine if damage is negligible or repairable, an optical inspection is required. Damage not listed or exceeding the following limits require depot engineering disposition.

NOTE

During installation of edging strips, transparency is masked approximately 1/8 to 1/4 inch from area receiving edging strip. When edging strips are bonded to transparency, pressure is applied to force out air bubbles and a thin line of adhesive may exist due to squeeze out. When cured, this adhesive line may appear running approximately 1/8 to 1/4 inch from edging strips around periphery of inner and/or outer mold line surface of transparency. Hanging of fingernail may occur on this adhesive line and should not be identified as scratch or cut in transparency. This adhesive line does not require removal and is acceptable to remain on transparency. See figure 4.

16. **Optical Inspection.**

- a. Assume pilot's position in forward cockpit.

NOTE

For best distortion inspection, a grid board with lines one-sixteenth of an inch wide on 1 inch centers, located approximately 15 feet from pilot's eye position, may be used.

b. Look up, down, and from side to side through transparency at grid board or an object at least 30 feet away which has distinct straight line construction.

c. Slowly move head sideways and up and down while viewing the grid board or object through the transparency.

d. Make note of any distortion, scratches, stains, streaks, and pitting that causes vision impairment.

- e. Repeat steps b through d for aft cockpit.

17. **Negligible Damage.** Negligible damage is damage that may be allowed to exist as is. Types and limits are:

- a. Minor distortion, stains, and streaks.

b. Pilot's vision is not obstructed by, or drawn to the defect.

c. Localized distortion (bull's eye), located completely within one inch of the edging strip.

d. Slight, gradual bending of a straight line element of the grid board or object used in optical inspection.

NOTE

Superficial scratches normally only need to be cleaned and have rain repellent applied (A1-F18AC-PCM-000).

e. Superficial scratches that do not positively hang a fingernail on the edge.

18. **Repairable Damage.** Repairable damage is damage that can be permanently repaired with no adverse affect on structural integrity, flight characteristics, or safety of the aircraft. Damage types and limits are:

a. Abrupt slope reversal of a straight line element of the grid board or object used in optical inspection.

b. Jumping or abrupt movement of a straight line element of the grid board or object used in optical inspection.

c. Vision impairment, defined as a condition which causes the observer to focus on the defect instead of a straight line element of the grid board or object used in optical inspection.

d. Scratches, nicks, and gouges having sharp enough edges to positively cause hanging of a fingernail.

e. Cleaning damage and gun gas erosion consisting of hoop wise scratches or pitting causing unacceptable clarity or optical definition through the transparency.

f. Damage as described in step d, within one-eighth of an inch of edging strip is unacceptable and will require an engineering disposition.

19. REPAIRS.

20. **Acrylic Transparency Polishing.** See figure 5. Damage to transparency is repaired by polishing if thickness limits can be maintained and optic quality can be restored. To determine the depth of a defect and thickness of transparency, a universal optical micrometer kit should be used before and after each repair.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Universal Optical Micrometer Kit	966A 1

Materials Required

Nomenclature	Specification or Part Number
Anti Static Cream	3MASC8
Cloth, Abrasive	1500 Micro-Mesh
Cloth, Abrasive	1800 Micro-Mesh
Cloth, Abrasive	12000 Micro-Mesh
Isopropyl Alcohol	TT-I-735, Grade B
Maintenance Kit	MIL-M-58091
Micro Gloss Abrasive Cream	-
Plastic Cleaner	P-P-560

NOTE

Mechanic's technique, depth, and nature of the defect will have an impact on time intervals required for each polishing step.

Transitions in thickness must be gradual to avoid visual distortion. Spread out each blend area. The deeper the defect, the larger the blend area. The initial defect removal shall be

accomplished over an extensive area and each successive step shall be blended over a progressively larger area.

For defects located within 1 inch of edge strips, try to limit the area of polishing to that within 1 inch of edge strip.

a. Before repairing any damage, make sure transparency is thoroughly cleaned (A1-F18AC-PCM-000).

b. Measure thickness of transparency using a universal optical micrometer (T.O. 33B4-2-10-1). Multiply all measured dimensions by a correction factor of 1.5 for stretched acrylic to obtain actual thickness. If forward panel thickness is less than 0.250-inch or aft panel thickness is less than 0.180-inch, transparency must be replaced.



Remove all objects such as rings, watches, belt buckles, and other items which may damage transparency.

Only hand polishing is allowed when working transparency. Use of power sanding and buffing equipment is prohibited to avoid damage.

c. There are thirteen principal steps to completely polish a major defect area in a transparency. The procedure may start at any step.

NOTE

The starting grit selected should be one which leaves a scratch depth close to the defect depth.

d. Start with the finer grits and proceed to the coarser grits until the correct starting grit is determined.

e. Remove the defect using the starting grit selected.

f. All steps following the starting grit selected must be completed in order to remove polishing marks left by the previous abrasive.

g. The following is a list of steps used in transparency polishing:

NOTE

Steps 1, 2, and 3 must be performed wet.

(1) STEP 1 uses 400 grit abrasive paper around a neoprene form block with water. Use fore and aft strokes.

(2) Thoroughly clean transparency with water.

(3) STEP 2 uses 600 grit abrasive paper around a neoprene form block with water. Use fore and aft strokes for approximately 3 minutes per square foot.

(4) Thoroughly clean transparency with water.

(5) STEP 3 uses 1500 (purple) micro-mesh cloth around a neoprene form block with water. Use fore and aft strokes for approximately 3 minutes per square foot.

(6) Thoroughly clean transparency with water.

NOTE

Polishing steps 4 through 11 can be performed wet or dry. It is easier to see progress of the surface restoration if the micro-mesh cloth is dry. The powdered particles of the transparency settle into the scratches and appear as white streaks. These streaks are easily seen and polishing is continued until the streaks are removed.

(7) STEP 4 uses 1800 (pink) micro-mesh cloth around a neoprene form block. Use fore and aft strokes for approximately 3 minutes per square foot.

(8) Thoroughly clean transparency with water.

NOTE

When using the dry procedure, frequently slap the micro-mesh cloth with your hand to loosen the abraded, powdered acrylic particles from the cloth.

(9) STEP 5 uses 2400 (white) micro-mesh cloth around a neoprene form block. Use fore and aft strokes applying medium pressure for approximately 3 minutes per square foot.



Plastic Cleaner

14

(10) Thoroughly clean transparency with clean cloth and plastic cleaner using fore and aft strokes. Dry the surface with clean, dry cloth.

(11) STEP 6 uses 3200 (blue) micro-mesh cloth around a neoprene form block. Use fore and aft strokes for approximately 2 minutes per square foot.

NOTE

The 3200 micro-mesh cloth used in STEP 6 leaves a finer scratch pattern than the 2400 micro-mesh cloth used in STEP 5.

(12) Thoroughly clean transparency with clean cloth and plastic cleaner using fore and aft strokes. Dry the surface with clean, dry cloth.

(13) STEP 7 uses 3600 (green) micro-mesh cloth around a neoprene form block. Use fore and aft strokes for approximately 2 minutes per square foot.

(14) Thoroughly clean transparency with clean cloth and plastic cleaner using fore and aft strokes. Dry the surface with clean, dry cloth.

(15) STEP 8 uses 4000 (yellow) micro-mesh cloth around a neoprene form block. Use fore and aft strokes for approximately 2 minutes per square foot.

NOTE

The 4000 micro-mesh cloth used in STEP 8 will leave a very fine scratch pattern after polishing.

(16) Thoroughly clean transparency with clean cloth and plastic cleaner using fore and aft strokes. Dry the surface with clean, dry cloth.

(17) STEP 9 uses 6000 (gold) micro-mesh cloth around a neoprene for block. Use fore and aft strokes for approximately 1-1/2 minutes per square foot.

(18) Thoroughly clean transparency with clean cloth and plastic cleaner using fore and aft strokes. Dry the surface with clean, dry cloth.

NOTE

No scratch pattern should remain on the surface of transparency after STEP 9. A hazed appearance should appear.

(19) STEP 10 uses 8000 (maroon) micro-mesh cloth around a neoprene form block. Use fore and aft strokes for approximately 1-1/2 minutes per square foot, except if the area being worked exhibits a pattern effect in fore and aft direction from previous polishing operations. Then use alternating 15 second intervals of vertical hoop strokes and horizontal fore and aft strokes to remove the pattern. Use very light pressure on this step.

(20) Thoroughly clean transparency with clean cloth and plastic cleaner using fore and aft strokes. Dry the surface with clean, dry cloth.

(21) STEP 11 uses 12000 (gray) micro-mesh cloth around a neoprene form block. Use fore and aft strokes for approximately 1-1/2 minutes per square foot, except if the area being worked exhibits a pattern effect in fore and aft direction from previous polishing operations. Then use alternating 15 second intervals of vertical hoop strokes and horizontal fore and aft strokes to remove the pattern. Use very light pressure on this step.

(22) Thoroughly clean transparency with clean cloth and plastic cleaner using fore and aft strokes. Dry the surface with clean, dry cloth.



Abrasive Cream

15

(23) STEP 12 uses micro clear abrasive cream. Mix approximately one part of cream with four parts clean water. Thoroughly shake the cream mixture before use. Put mixture on clean cotton cloth previously dampened with clean water. Use fore and aft strokes for approximately one minute per square foot.

(24) Clean transparency with clean cotton cloth moistened with clean water. Dry the surface with clean, dry cotton cloth.



Anti Static Cream

16

(25) STEP 13 uses anti-static cream. Apply a thin film to transparency surface using fore and aft strokes. Hand buff the transparency dry with clean, dry cotton cloth using fore and aft strokes.

(26) Apply rain repellent coating (A1-F18AC-PCM-000).

(27) Measure thickness of transparency using universal optical micrometer (T.O. 33B4-2-10-1). Multiply all measured dimensions by a correction factor of 1.5 for stretched acrylic to obtain actual thickness. If forward panel thickness is less than 0.250-inch or aft panel thickness is less than 0.180-inch, transparency must be replaced.

(28) Perform optical inspection procedure in paragraph 16. If any defect is visible, repeat steps necessary to eliminate the defect.

21. Edging Strip Repair. Phenolic edging strips were installed on aircraft F/A-18B 161354 thru 162413. Erosion of phenolic strips may occur as a result of wind, rain, or hail. Damage that is less than 50 percent of edging strip thickness is repaired by filling damage and installing repair strap per paragraph 22. Damage that is more than 50 percent of edging strip thickness is repaired by removing existing phenolic edging strip and installing a metal edging strip per paragraph 23.

22. Damage Less Than 50 Percent of Edging Strip Thickness. See figure 6.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Torque Wrench, 0 to 60 Inch-Pounds	-

Materials Required

Nomenclature	Specification or Part Number
Adhesive	EA9321 A/B
Bolt (35)	NAS663V12HT
Bolt (4)	NAS663V14HT
Cheesecloth	CCC-C-440, Type 1, Class 1
Cleaning Compound	PR146 Blue
Cloth, Nylon Scrim	Pattern 30
Filler Washer (39)	4M119D6
Isopropyl Alcohol	TT-I-735, Grade 1
Paper, Abrasive	A-A-1047, Grit 240-9x11, Grit 320 9x11
Primer, Adhesive	PR142
Sealing Compound	PR-1725, B-2
Tape, Pressure Sensitive	855-1.000 inch

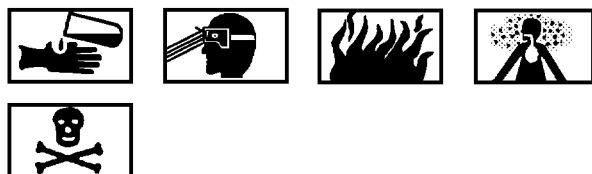
a. Mask transparency next to phenolic edging strip.

b. Remove 39 fasteners where transparency attaches to canopy arch.



Use care not to sand into acrylic transparency while removing damaged fibers.

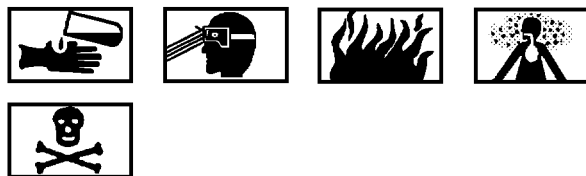
c. Remove any erosion damage, delaminations, or extruding fibers by sanding with 240 grit abrasive paper.



Isopropyl Alcohol

2

d. Clean damaged area using clean cheesecloth moistened with isopropyl alcohol.



Adhesive

17

e. Prepare EA9321 A/B adhesive (A1-F18AC-SRM-200, WP011 00).

f. Fill damaged area to edging strip mold line with adhesive adding excess adhesive to allow for shrinkage.

g. Cure adhesive (A1-F18AC-SRM-200, WP011 00).



Use care not to sand into acrylic transparency causing damage.

h. Sand repair area flush with edging strip mold line using 240 grit abrasive paper.

i. Bond 4M119D6 filler washers in all countersinks using EA9321 A/B adhesive.

j. Fabricate repair strap per figure 6.

k. Clean repair strap by wiping with clean cheesecloth moistened with isopropyl alcohol.

l. Abrade bonding surface of repair strap to a satin finish using 320 grit abrasive paper.

m. Clean bonding surface of repair strap with clean, dry cheesecloth.



Cleaning Compound

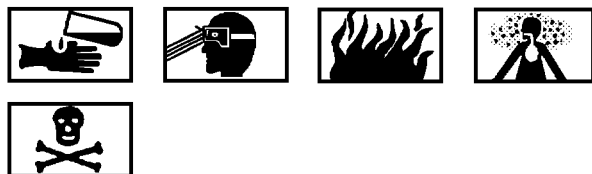
18

n. Use a clean, dry cheesecloth to apply a thin coat of PR146 Blue cleaning compound to bonding surface of repair strap.

o. Clean phenolic edging strip with clean cheesecloth moistened with isopropyl alcohol.

p. Abrade bonding surface of phenolic edging strip using 320 grit abrasive paper.

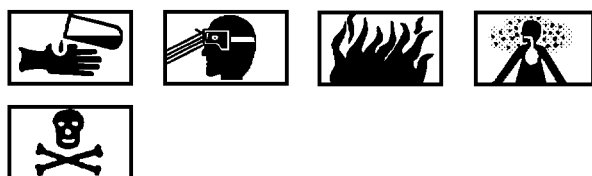
q. Remove sanding dust by wiping with clean, dry cheesecloth.



Adhesive Primer

19

r. Use a clean, dry cheesecloth to apply a thin coat of primer adhesive to area on phenolic edging strip where repair strap will be installed.



Sealing Compound

20

s. Apply a thin coat of sealing compound to surfaces being bonded.

t. Install scrim cloth between bonding surfaces to control bond line thickness.

u. Position repair strap on phenolic edging strip.



Use care not to tighten clamps excessively. Damage to transparency may result.

v. Install clamps applying sufficient pressure to force out air and excessive sealing compound.

w. Remove excessive sealing compound with cheesecloth dampened with isopropyl alcohol.

x. Cure sealing compound for 25 hours before removing clamps.



Use extreme care when back drilling not to damage holes in acrylic transparency.

y. Back drill 0.195 +0.007 -0.000 inch diameter holes in repair strap, 39 places, using existing holes in 74A350801 arch as guide.

z. Countersink holes in repair strap to flushness requirement of fastener.

aa. Wet install fasteners using PR-1725, B-2 A1-F18AC-SRM-200, WP011 00) 39 places, detail F.

ab. Torque fasteners to 15-20 inch-pounds.

ac. Apply finish system as required (A1-F18AC-SRM-500, WP021 00).

23. Damage More Than 50 Percent of Edging Strip Thickness. See figure 7.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Torque Wrench,	-
0 to 60 Inch-Pounds	

Materials Required

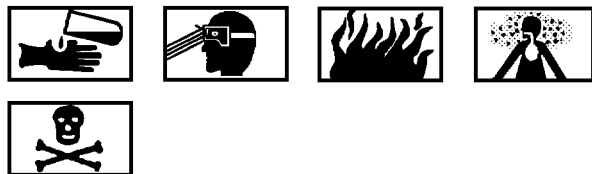
Nomenclature	Specification or Part Number
Cheesecloth	CCC-C-440, Type 1, Class 1
Cleaning Compound	PR146 Blue
Cloth, Nylon Scrim Cloth	Pattern 30
Edging Strip	74A350635-2005
Isopropyl Alcohol	TT-I-735, Grade 1
Paper, Abrasive	A-A-1047, Grit 240-9x11, Grit 320-9x11
Primer, Adhesive	PR142
Sealing Compound	PR-1725, B-2
Tape, Pressure Sensitive	855- 1.000 inch

- a. Mask transparency next to phenolic edging strip.
- b. Remove 41 fasteners where transparency attaches to 74A350801 arch and 74A350814 frame.
- c. Remove damaged phenolic edging strip by peeling from acrylic transparency.



Use care not to sand into acrylic transparency while removing residual adhesive and/or phenolic fibers.

- d. Remove any residual adhesive and/or phenolic edging strip by lightly sanding with 240 grit abrasive paper.



Isopropyl Alcohol

2

- e. Clean area where phenolic edging strip was removed using clean cheesecloth moistened with isopropyl alcohol.

- f. Abrade bonding surface of 74A350635 edging strip to a satin finish using 320 grit abrasive paper.

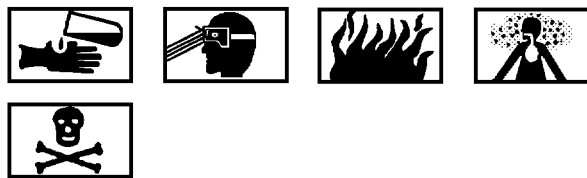
- g. Clean bonding surface of edging strip with a clean, dry cheesecloth.



Cleaning Compound

18

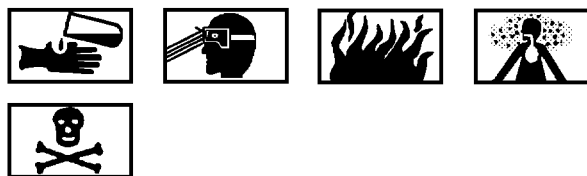
- h. Use a clean, dry cheesecloth to apply a thin coat of PR146 Blue cleaning compound to bonding surface of edging strip.



Adhesive Primer

19

- i. Use a clean, dry cheesecloth to apply a thin coat of primer adhesive to areas on acrylic transparency where edging strip will be installed.



Sealing Compound

20

- j. Apply a thin coat of sealing compound to surfaces being bonded.

- k. Install scrim cloth between bonding surfaces to control bond line thickness.

- l. Position edging strip on acrylic transparency.



Use care not to tighten clamps excessively. Damage to transparency may result.

- m. Install clamps applying sufficient pressure to force out air and excessive sealing compound.

- n. Remove excessive sealing compound with cheesecloth dampened with isopropyl alcohol.

- o. Cure sealing compound for 25 hours before removing clamps.

- p. If gap at end of edging strip exceeds 0.06 inch do substeps below:

- (1) Prepare PR-1725, B-2 sealing compound.

- (2) Fill in gaps to edging strip mold line with sealing compound.

(3) Cure sealing compound for 25 hours.



Use extreme care when back drilling not to damage holes in acrylic transparency.

q. Back drill 0.195 +0.007 -0.000 inch diameter holes in edging strip 41 places using existing holes in 74A350801 arch and 74A350814 frame.

r. Countersink holes in edging strip to flushness requirement of fastener.

s. Wet install fasteners using PR-1725, B-2 (A1-F18AC-SRM-200, WP011 00) 41 places, detail C.

t. Torque fasteners to 15-20 inch-pounds.

u. Apply finish system as required (A1-F18AC-SRM-500, WP021 00).

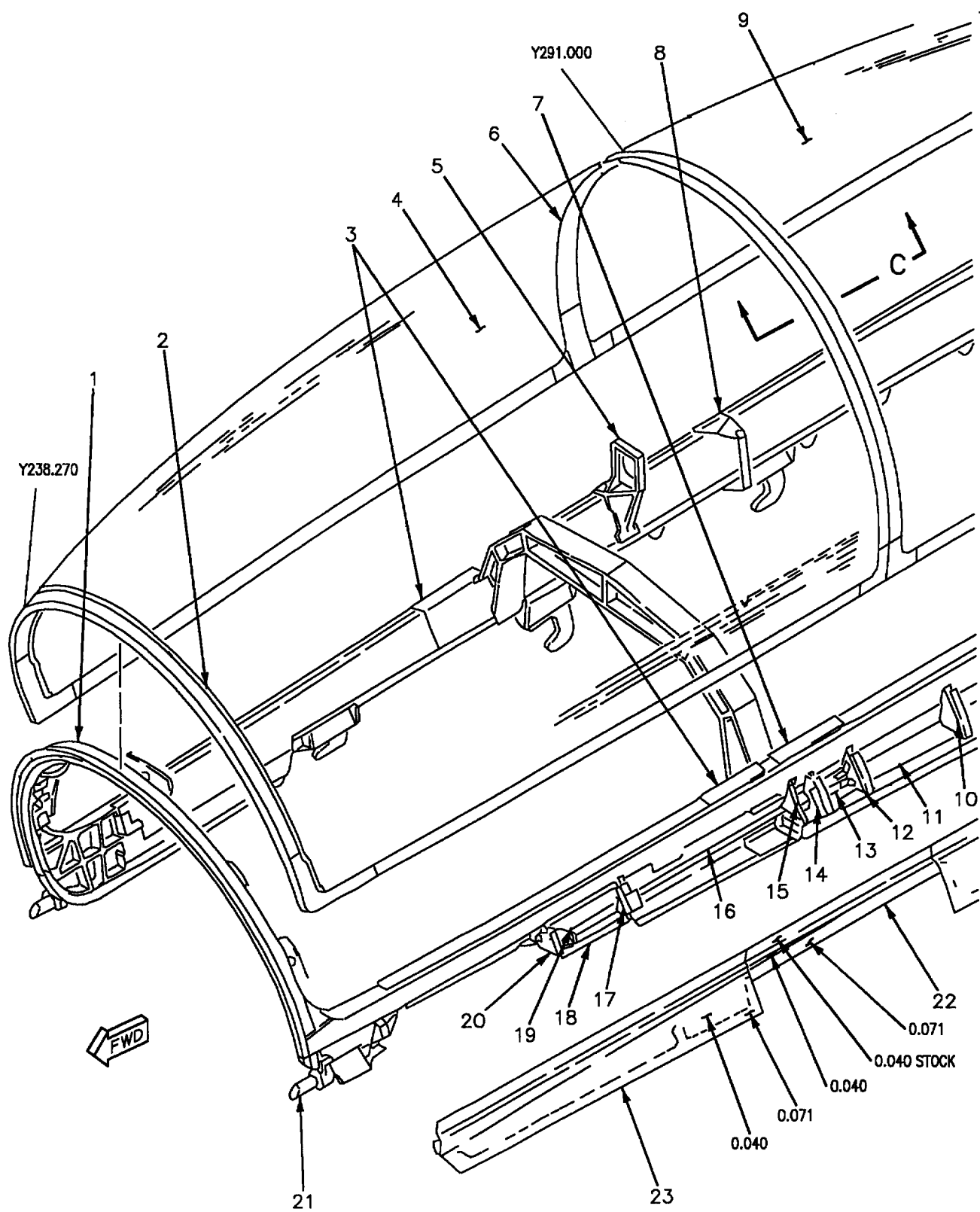


Figure 1. Material Index (Sheet 1)

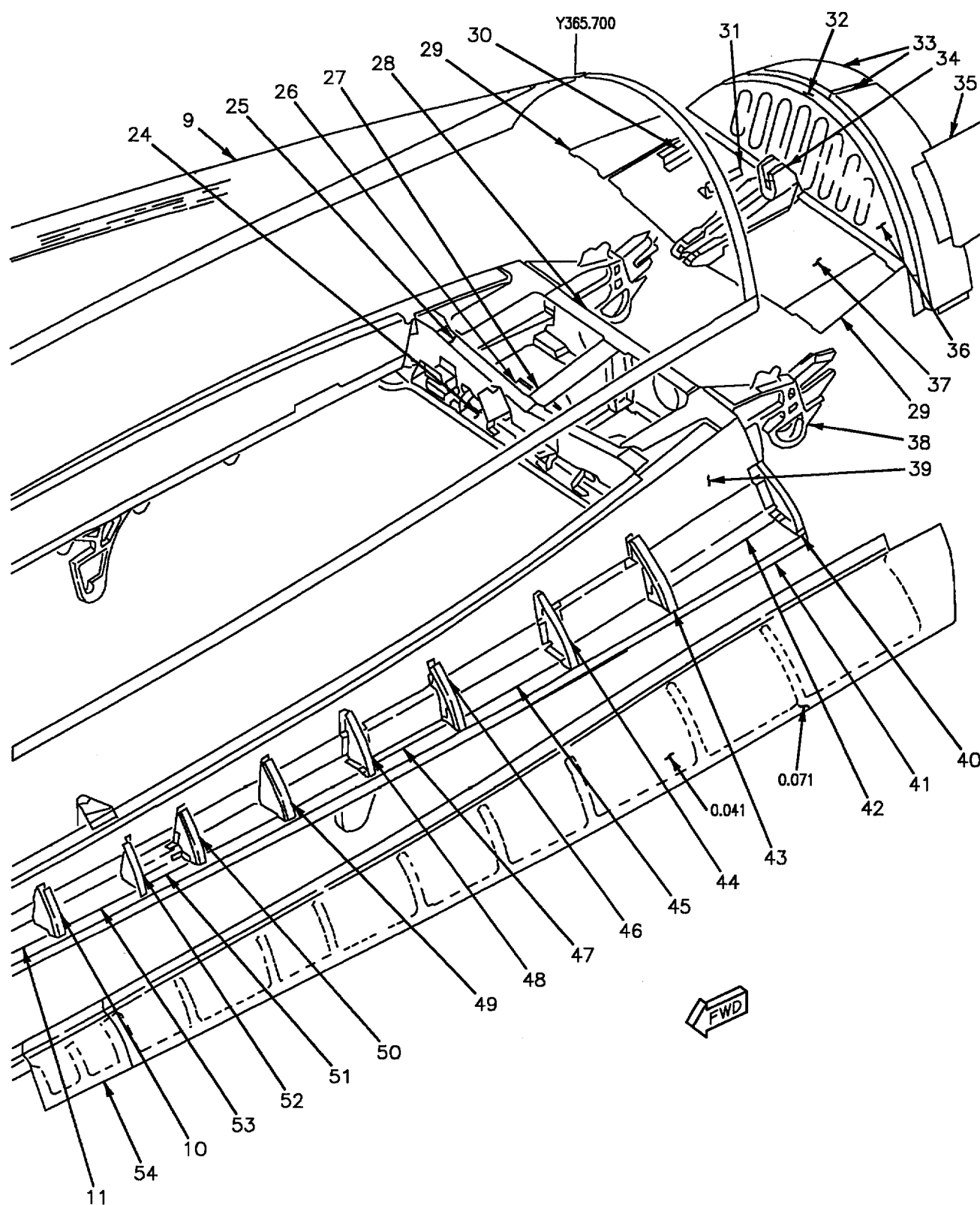


Figure 1. Material Index (Sheet 2)

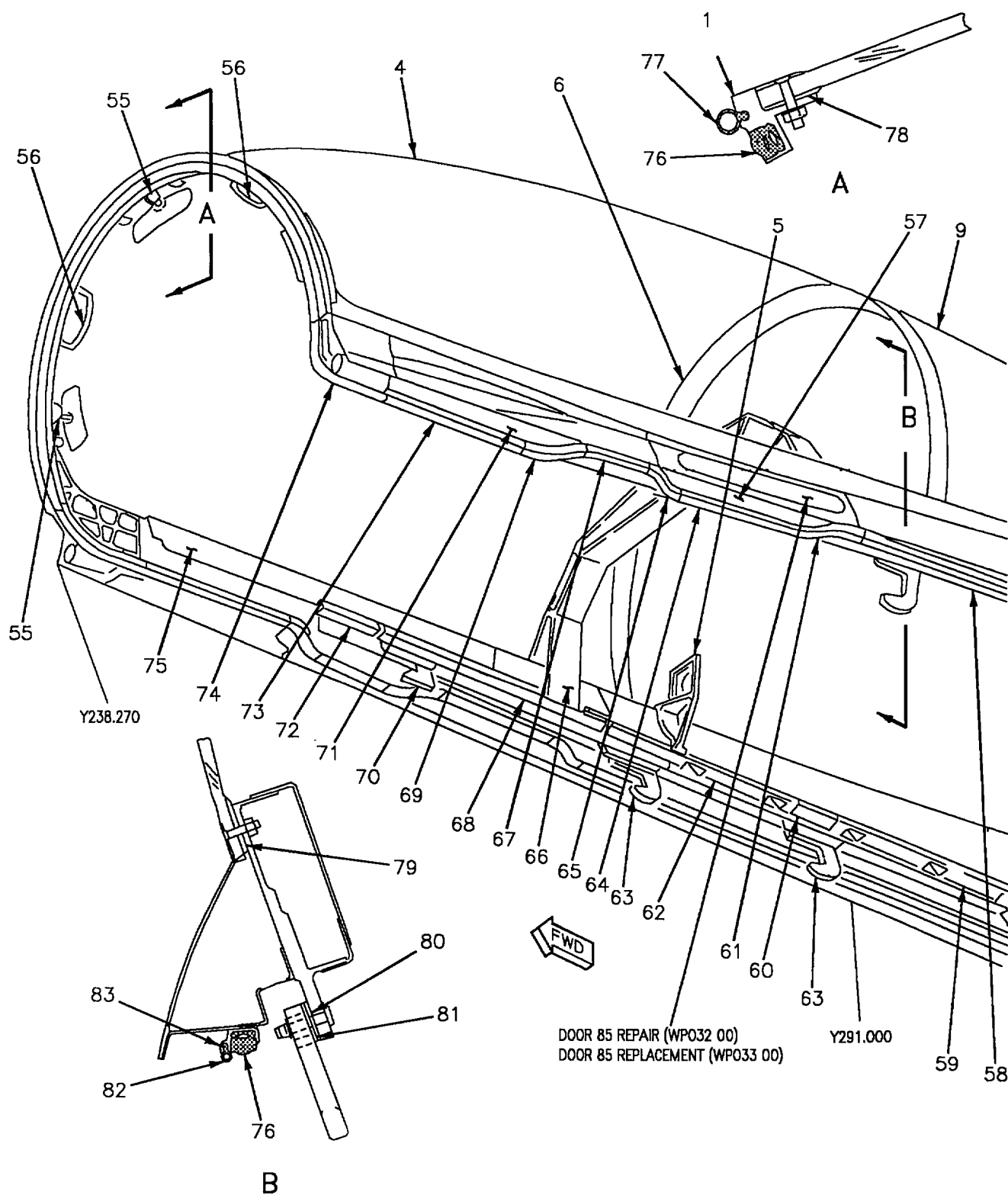


Figure 1. Material Index (Sheet 3)

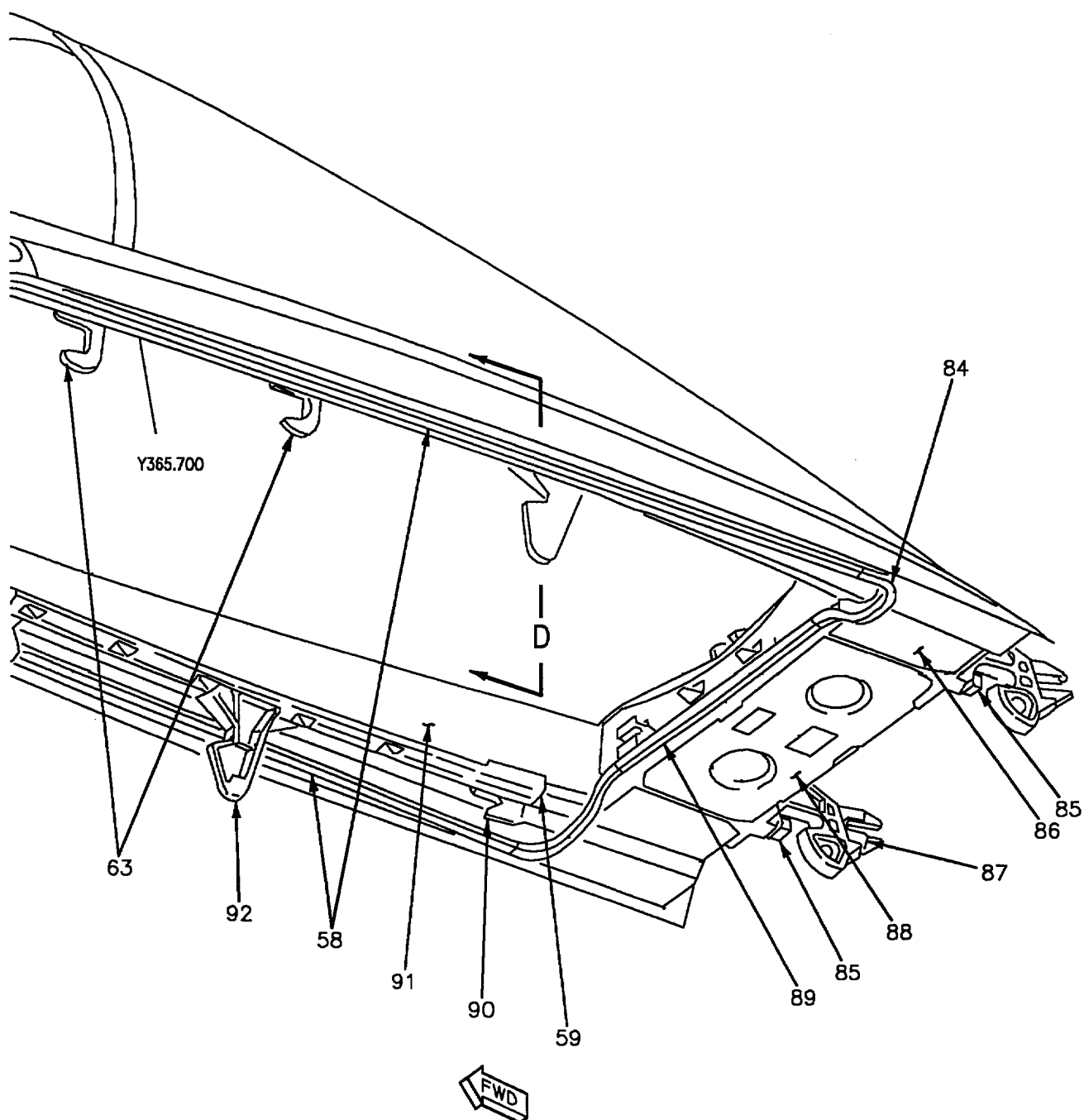


Figure 1. Material Index (Sheet 4)

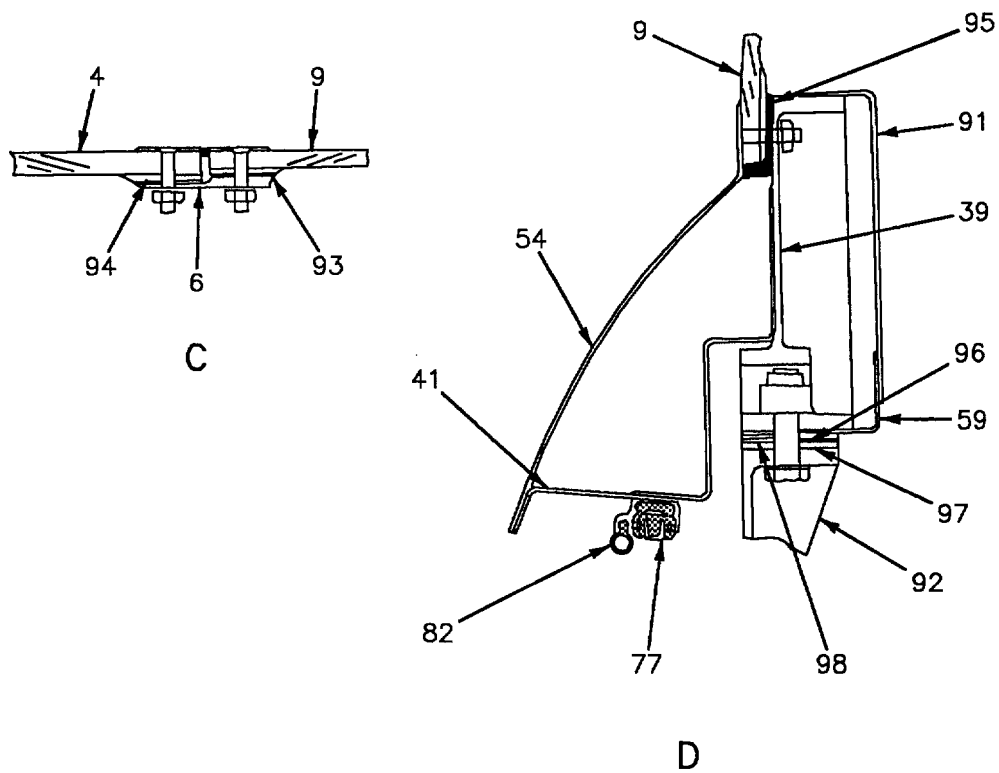


Figure 1. Material Index (Sheet 5)






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1		Arch 74A350801-2003	1MA10437D01 Extr	7075-T73 Alclad
2		Edging Strip 74A350635-2005	0.050 Sheet	6061-T6 Al Aly
3		Angle 74A350826-2053, -2054	0.020 Sheet	7075-T6 Alclad
4	 	Panel 74A350800-1001 74A350800-1005	0.350 Sheet	Stretched Acrylic
5		Support 74A350869-2001	2.00 Plate	7075-T7351 Al Aly
6		Splice 74A350822-2003	1MA10440D01 Extr	7075-T73 Al Aly
7		Angle 74A350826-2007, -2008	0.040 Sheet	7075-T6 Alclad
8		Handle 74A350871-1001, -1002	0.090 Sheet	6061-T62 Al Aly
9	 	Panel 74A350800-1003 74A350800-1007	0.250 Sheet	Stretched Acrylic
10		Angle 74A350841-1019, -1020	0.032 Sheet	7075-T6 Alclad
11		Support 74A350823-2013, -2014	0.040 Sheet	7075-T6 Alclad
12		Angle 74A350841-1003, -1004	0.032 Sheet	7075-T6 Alclad
13		Support 74A350823-1009, -1010	0.040 Sheet	7075-T6 Alclad
14		Intercostal 74A350841-1023, -1024	0.032 Sheet	7075-T6 Alclad
15		Intercostal 74A350841-2087, -2088	0.032 Sheet	7075-T6 Alclad
16		Support 74A350823-2051, -2052	0.040 Sheet	7075-T6 Alclad
17		Angle 74A350841-1025, -1026	0.040 Sheet	7075-T6 Alclad

Figure 1. Material Index (Sheet 6)



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19		Support 74A350823-2057, -2058	0.040 Sheet	7075-T6 Alclad
20		Intercostal 74A350841-2093, -2094	0.040 Sheet	7075-T6 Alclad
21		Latch 74A350803-2003, -2004 74A350803-2005, -2006	0.750 Plate	PH13-8MO Cres
22		Sill 74A350824-2013, -2014	0.040 Sheet	7075-T6 Alclad
23		Fairing 74A350824-2015, -2016	 Sheet	7075-T6 Alclad
24		Angle 74A350841-2071	0.032 Sheet	7075-T6 Alclad
25		Beam 74A350828-2001	1.75 Plate	7075-T7351 Al Aly
26		Support 74A350811-2001	0.050 Sheet	7075-T6 Alclad
27		Intercostal 74A350837-2001	2.50 Plate	7075-T7351 Al Aly
28		Beam 74A350829-2001	1.75 Plate	7075-T7351 Al Aly
29		Plate 74A350834-2005	0.100 Sheet	6Al-4V Ti Anl
30		Support 74A350832-2009	0.040 Sheet	7075-T6 Alclad
31		Support 74A350832-2007	0.040 Sheet	7075-T6 Alclad
32		Strip 74A350006-2009	0.031 Sheet	Silicone Rubber
33		Fairing 74A350825-2002, -2001	0.063 Sheet	7075-T6 Alclad
34		Fitting 74A350839-2005	Forging	7075-T7352 Al Aly

Figure 1. Material Index (Sheet 7)









IDX NO.	EFT	NOMENCLATURE AND PART NO.	DESCRIPTION	MATERIAL
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36		Bulkhead 74A350844-2003	0.040 Sheet	7075-T6 Alclad
37		Plate 74A350834-2007, -2010	0.100 Sheet	6A1-4V Ti Anl
38		Hinge 74A350835-2003, -2004	Forging	6A1-4V Ti Anl
39	 	Frame 74A350814-2007, -2008 74A350814-2008, -2010	Forging	7050-T73652 Al Aly
40		Angle 74A350841-2039, -2040	0.032 Sheet	7075-T6 Alclad
41	 	Support 74A350823-2053, -2054 74A350823-2053, -2072	0.040 Sheet	7075-T6 Alclad
42		Support 74A350823-2041, -2042	0.040 Sheet	7075-T6 Alclad
43		Angle 74A350841-2035, -2036	0.032 Sheet	7075-T6 Alclad
44	 	Angle 74A350841-1013, -1014 74A350841-1013, -1027	0.032 Sheet	7075-T6 Alclad
45	 	Support 74A350823-2029, -2030 74A350823-2029, -2074	0.040 Sheet	7075-T6 Alclad
46		Angle 74A350841-1011, -1012	0.032 Sheet	7075-T6 Alclad
47		Support 74A350823-1007, -1008	0.040 Sheet	7075-T6 Alclad
48		Angle 74A350841-1009, -1010	0.032 Sheet	7075-T6 Alclad
49		Angle 74A350841-1021, -1022	0.032 Sheet	7075-T 6 Alclad
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Figure 1. Material Index (Sheet 8)







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51		Support 74A350823-1005, -1006	0.040 Sheet	7075-T6 Alclad
52		Angle 74A350841-1005, -1006	0.032 Sheet	7075-T6 Alclad
53		Support 74A350823-2021, -2022	0.040 Sheet	7075-T6 Alclad
54	 	Fairing 74A350824-2009, -2010 74A350824-2009, -2020	 Sheet	7075-T6 Alclad
55		Support 74A350723-2001	0.063 Sheet	7075-T6 Alclad
56		Handle 74A350719-1001, -1002	0.065 Sheet	6061-T62 Al Aly
57		Pan 74A350863-2001, -2002	0.071 Sheet	6061-T62 Al Aly
58		Retainer 74A350817-2011, -2012	1MA10330D06 Extr	7075-T73 Alclad
59	 	Angle 74A350826-2013, -2014 74A350826-2075, -2076	0.040 Sheet	7075-T76 Alclad
60		Angle 74A350826-2011, -2012	0.040 Sheet	7075-T76 Alclad
61		Retainer 74A350864-2001, -2002	1MA10330D01 Extr	7075-T73 Alclad
62		Angle 74A350826-2009, -2010	0.040 Sheet	7075-T76 Alclad
63		Latch  74A350805-2001	0.500 Plate	Cres
64		Retainer 74A350817-2009, -2010	1MA10330D06 Extr	7075-T73 Alclad
65		Retainer 74A350864-2003, -2004	1MA10330D01 Extr	7075-T73 Alclad
66		Beam 74A350860-2001	3.75 Plate	7075-T7351 Al Aly
67		Retainer 74A350817-2007, -2008	1MA10330D01 Extr	7075-T73 Alclad

Figure 1. Material Index (Sheet 9)



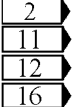



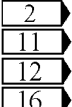

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69		Guide 74A350849-2001, -2002	Casting	A356-T61 Al Aly
70		Latch  74A350804-2001	0.500 Plate	Cres
71		Angle 74A350809-2011, -2012	0.063 Sheet	7075-T6 Alclad
72		Angle 74A350826-2003, -2004	0.040 Sheet	7075-T76 Alclad
73		Guide 74A350819-2003, -2004 74A350819-2005, -2006	1MA10471-D05 Extr	7075-T73 Alclad
74		Guide 74A350802-2001, -2002	Casting	A356-T61 Al Aly
75		Angle 74A350826-2062, -2061	0.040 Sheet	7075-T76 Alclad
76		Seal 8241-201	0.50 Molded	Silicone Rubber
77		Seal 74A350006-2013 74A350006-2019 74A350006-2021 74A350006-2023	11M942-1 Extr 11M942-1 Extr 11M1018-5 Extr 11M1018-6 Extr	Silicone Rubber
78		Strip 74A350006-2001	0.031 Sheet	Silicone Rubber
79		Strip  74A350006-2005	0.031 Sheet	Silicone Rubber
80		Shim  74A350747-2001	0.094 Sheet	5052-H39 Al Laminate
81		Plate  74A350706-2001	0.080 Sheet	301 Cres
82		Seal  74A350006-2017 74A350006-2019 74A350006-2021 74A350006-2023	11M957-1 Extr 11M942-1 Extr 11M1018-5 Extr 11M1018-6 Extr	Silicone Rubber

Figure 1. Material Index (Sheet 10)






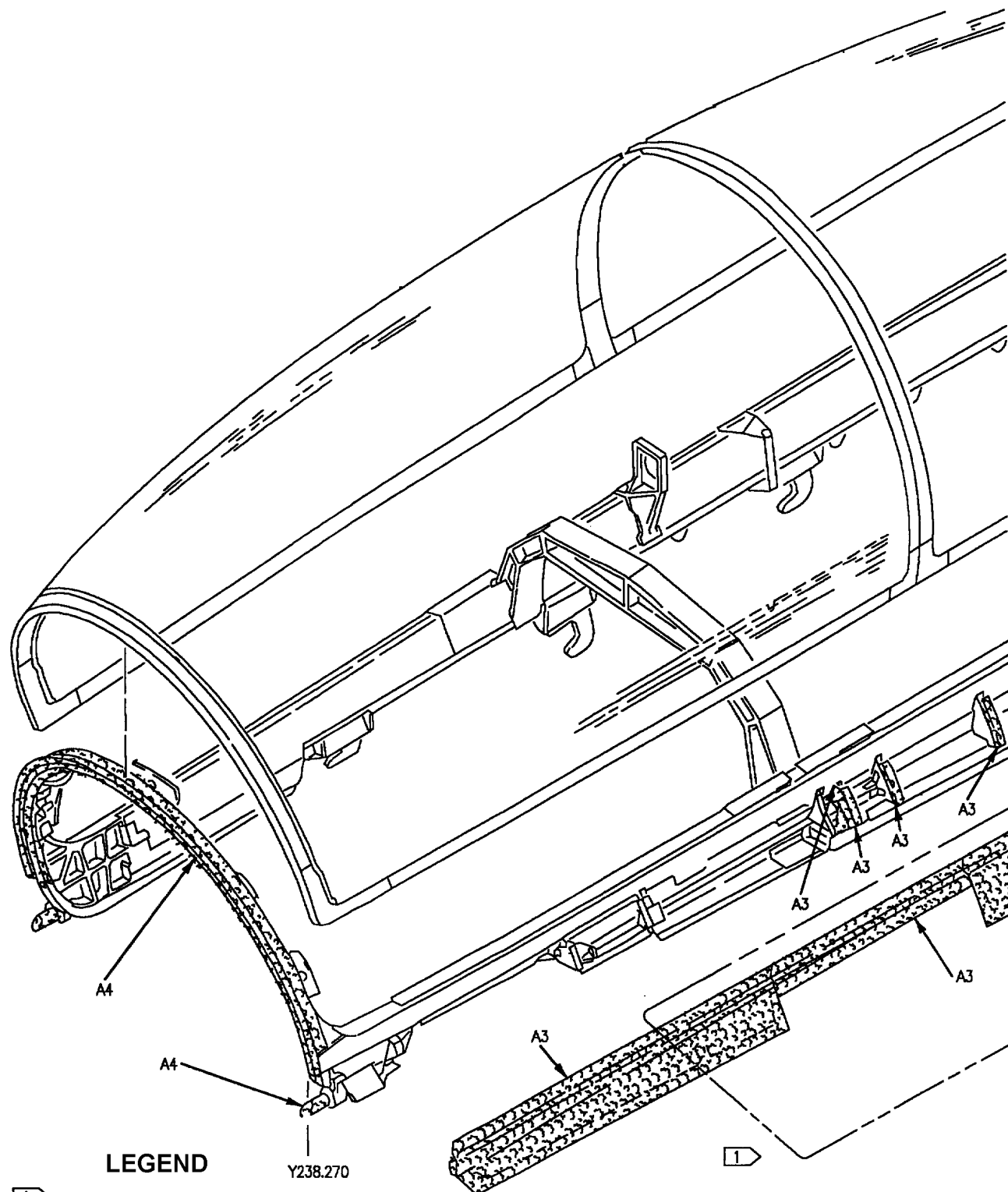
IDX NO.	EFT	NOMENCLATURE AND PART NO.	DESCRIPTION	MATERIAL
83		Seal Guide 74A350849-2005, -2006	Casting	A356-T61 Al Aly
84		Retainer 74A350830-2005, -2006	Casting	A356-T61 Al Aly
85		Stop 74A350838-1001	0.012 Sheet	7075-T6 Alclad
86		Plate 74A350834-2001, -2002	0.090 Sheet	7075-T76 Alclad
87		Plate 74A350836-2001	0.125 Sheet	301 Cres
		Stop 74A350874-2001	0.250 Plate	Al Bronze Aly
		74A350874-2003		
88		Plate 74A350834-2003	0.090 Sheet	7075-T76 Alclad
89		Retainer 74A350816-2001	1MA10021D01 Extr	7075-T73 Alclad
90		Latch 74A350808-2001	0.50 Plate	PH13-8MO Cres
91		Angle 74A350826-2064, -2063	0.040 Sheet	7075-T76 Alclad
		74A350826-2072, -2071		
92		Cam 74A350842-2002, -2001	1.50 Plate	6Al-4V Ti Anl
93		Strip 74A350006-2011	0.031 Sheet	Silicone Rubber
94		Strip 74A350006-2003	0.031 Sheet	Silicone Rubber
95		Strip 74A350006-2007	0.031 Sheet	Silicone Rubber
96		Shim 74A350847-2021	0.048 Sheet	5052-H39 Al Laminate
97		Plate 74A350807-2001	0.100 Plate	6Al-4V Ti Anl
98		Shim 74A350847-2023	0.063 Sheet	6061-T6 Al Aly

Figure 1. Material Index (Sheet 11)

IDX NO.	EFT	NOMENCLATURE AND PART NO.	DESCRIPTION	MATERIAL
LEGEND				
1		Lands are 0.071 and bays are 0.040.		
2		F/A-18B 161354 THRU 161357.		
3		F/A-18B 161360 AND UP.		
4		F/A-18B 162419 AND UP.		
5		F/A-18B 161354 THRU 161360.		
6		F/A-18B 161704 THRU 161719.		
7		F/A-18B 161723 AND UP.		
8		F/A-18B 161354 THRU 162413.		
9		Four Required.		
10		Two Required.		
11		F/A-18B 161360 THRU 161740.		
12		F/A-18B 161746 THRU 162864.		
13		F/A-18B 161354 THRU 162885.		
14		F/A-18B 163104 AND UP.		
15		Eight Required.		
16		F/A-18B 162870 AND UP.		
17		F/A-18B 161704 AND UP.		

Figure 1. Material Index (Sheet 12)



LEGEND

- 1 REPAIRS IN THIS AREA REQUIRE SPECIAL ATTENTION. INITIAL FASTENERS MUST BE REPLACED. REPAIRS MUST NOT HINDER COVER FROM OPENING DURING CANOPY JETTISON.

Figure 2. Repair Zones (Sheet 1)

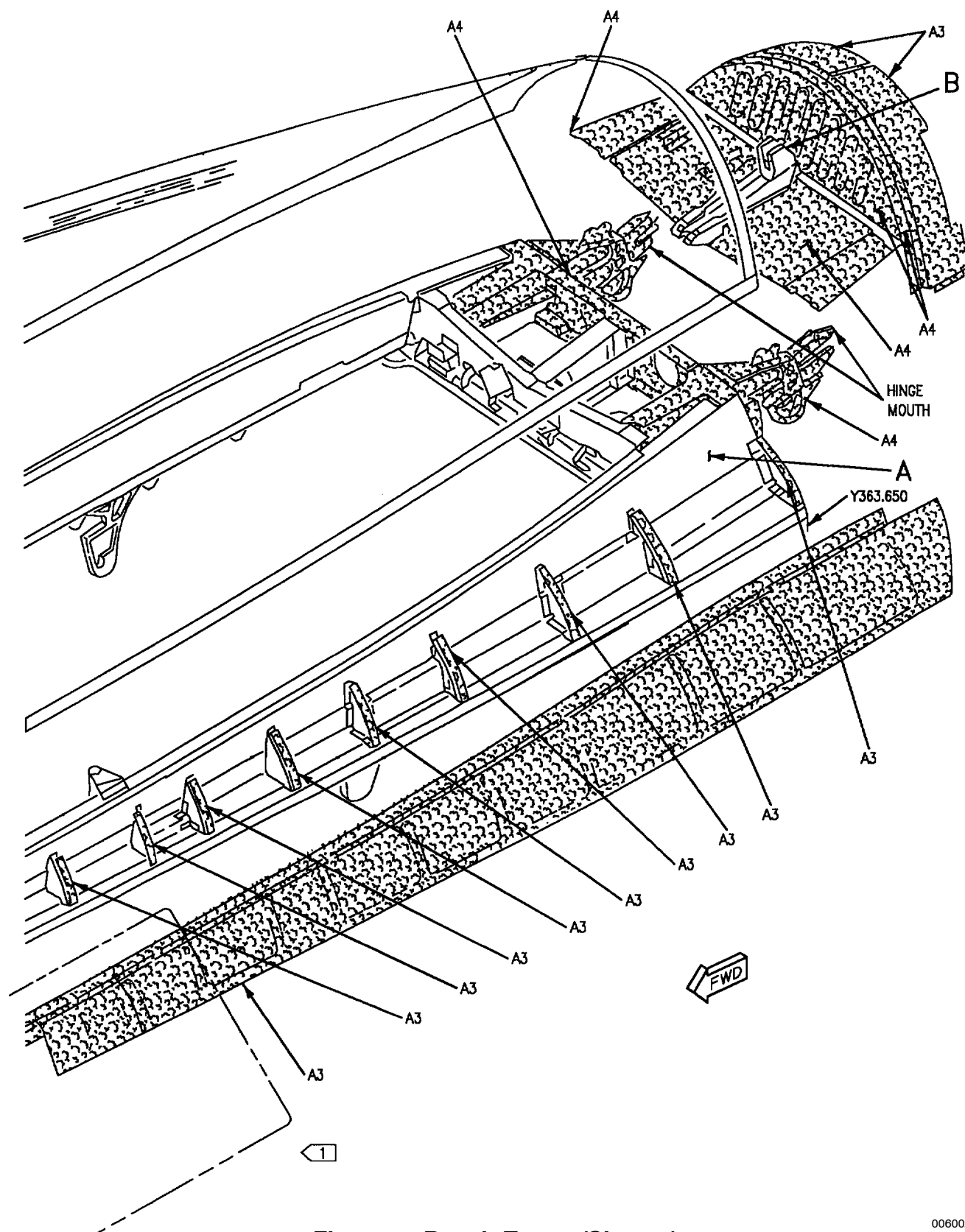


Figure 2. Repair Zones (Sheet 2)

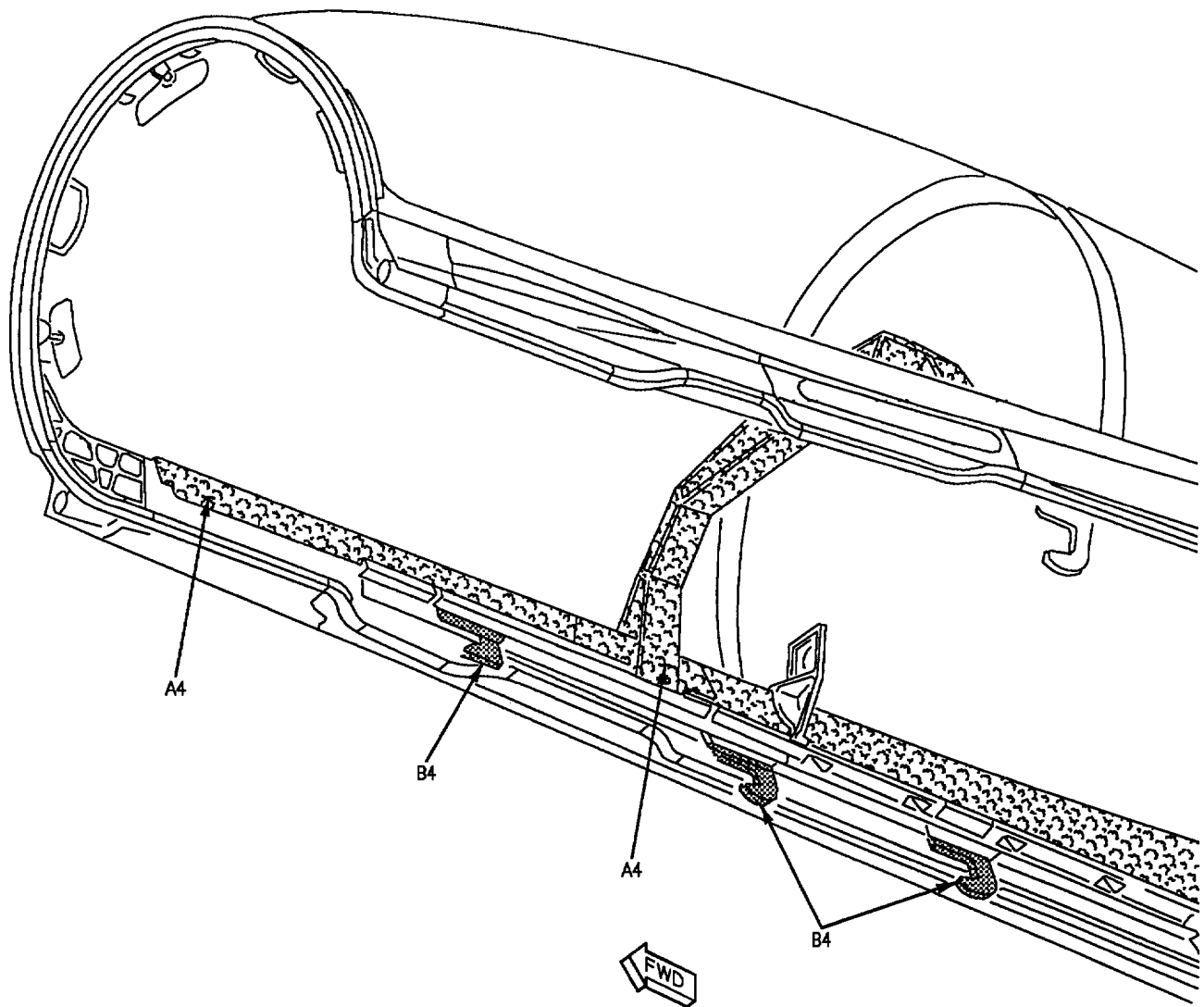


Figure 2. Repair Zones (Sheet 3)

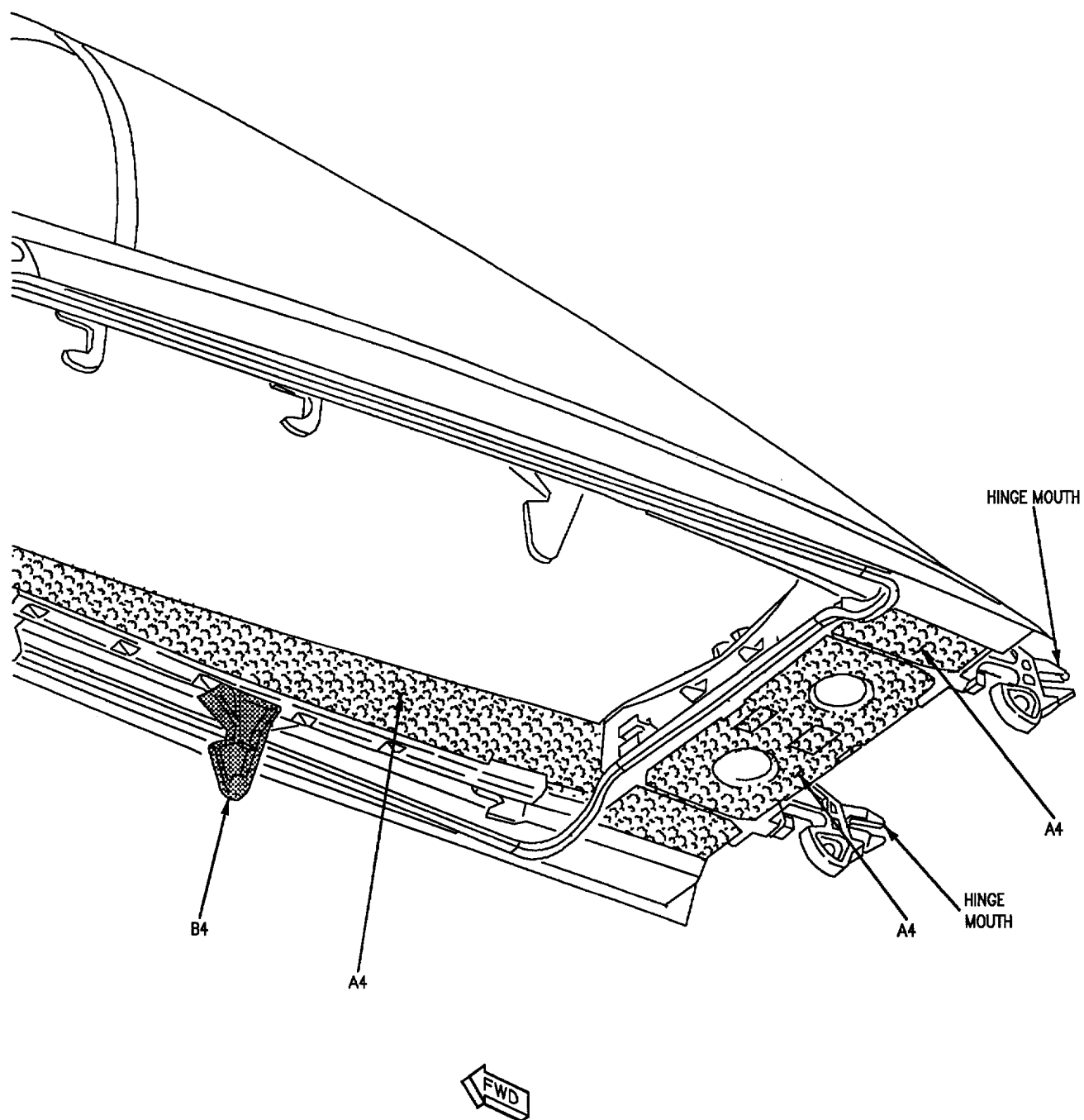


Figure 2. Repair Zones (Sheet 4)

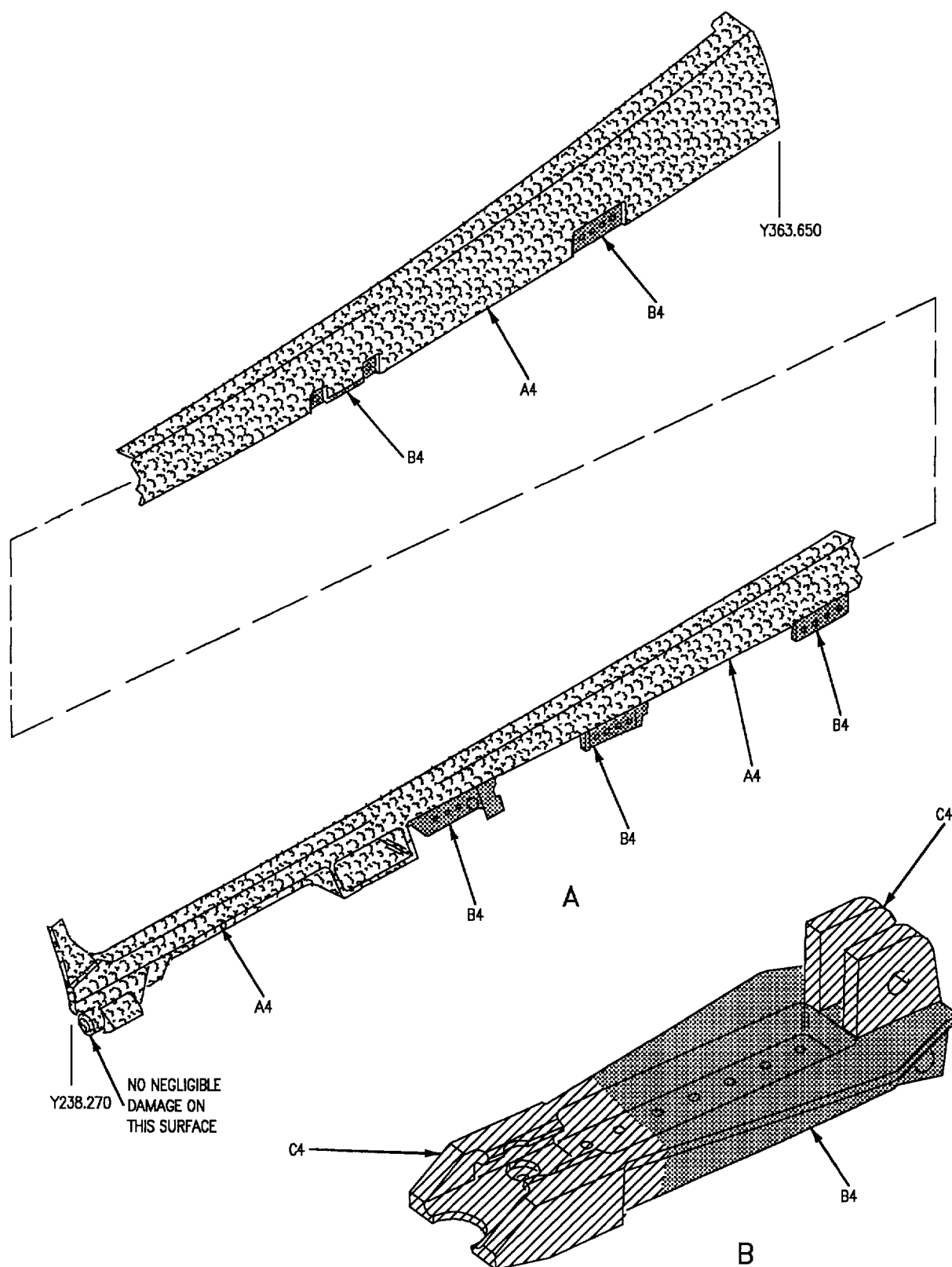
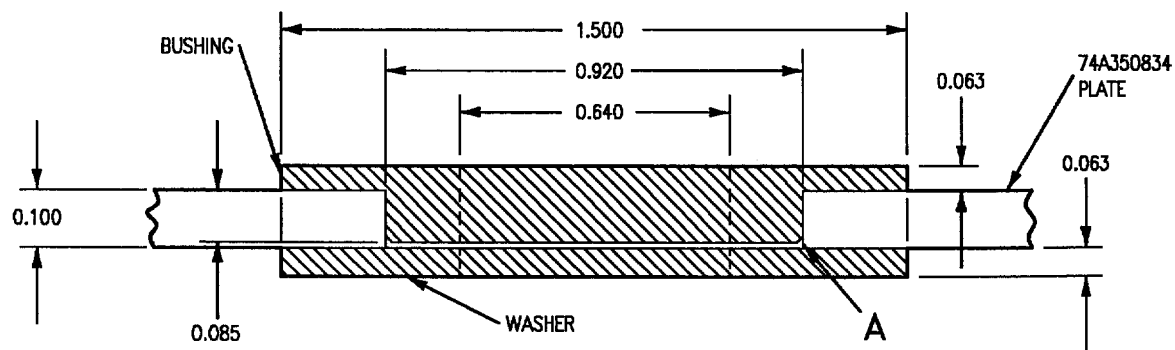
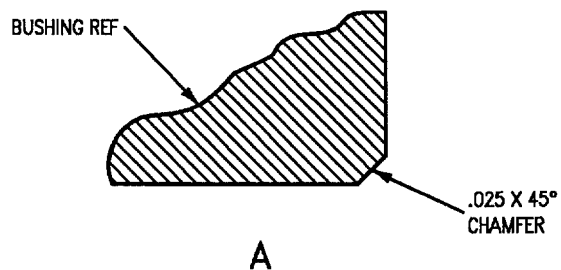
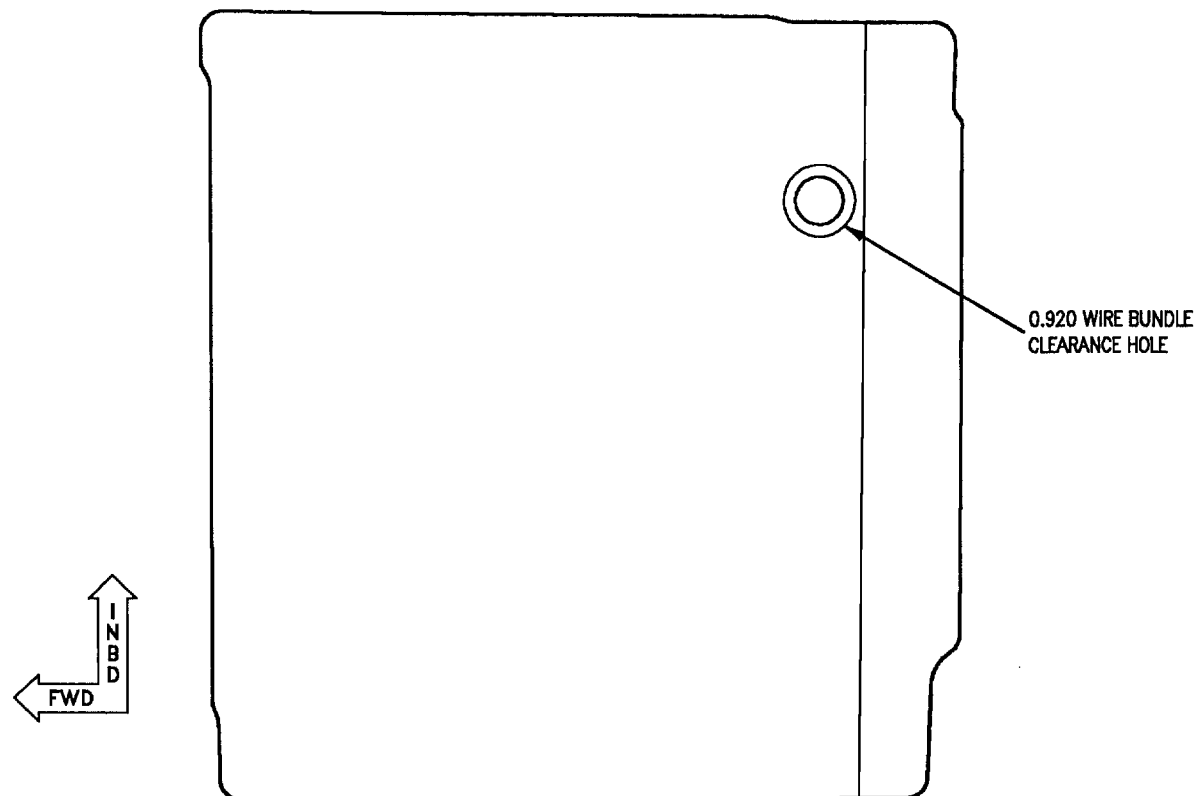


Figure 2. Repair Zones (Sheet 5)



BUSHING AND WASHER
MATERIAL: 7075-T73 OR T7351

TOLERANCES:
X.XX ± 0.030
X.XXX ± 0.010

Figure 3. Canopy Deck, 74A350834, Adaption

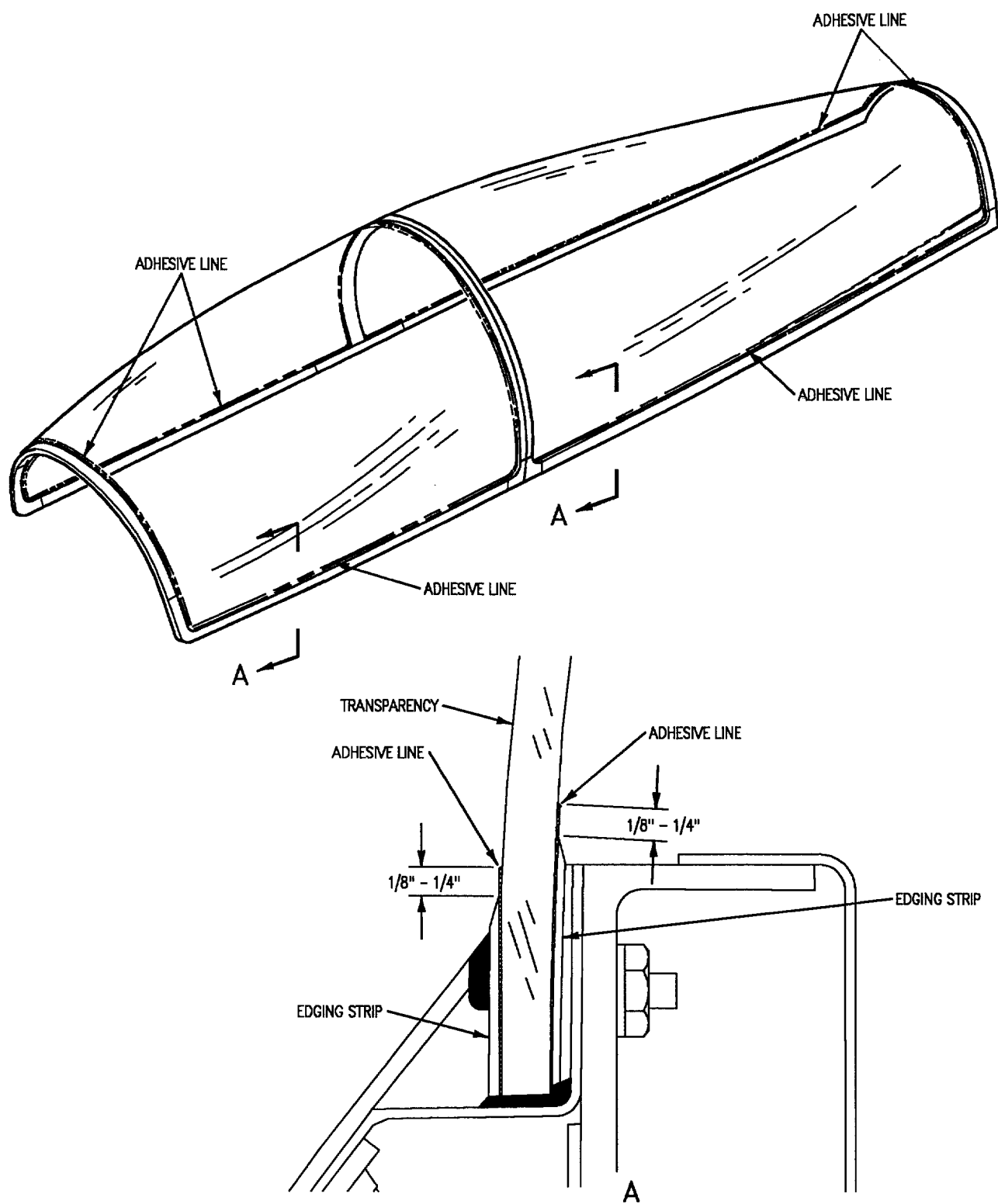
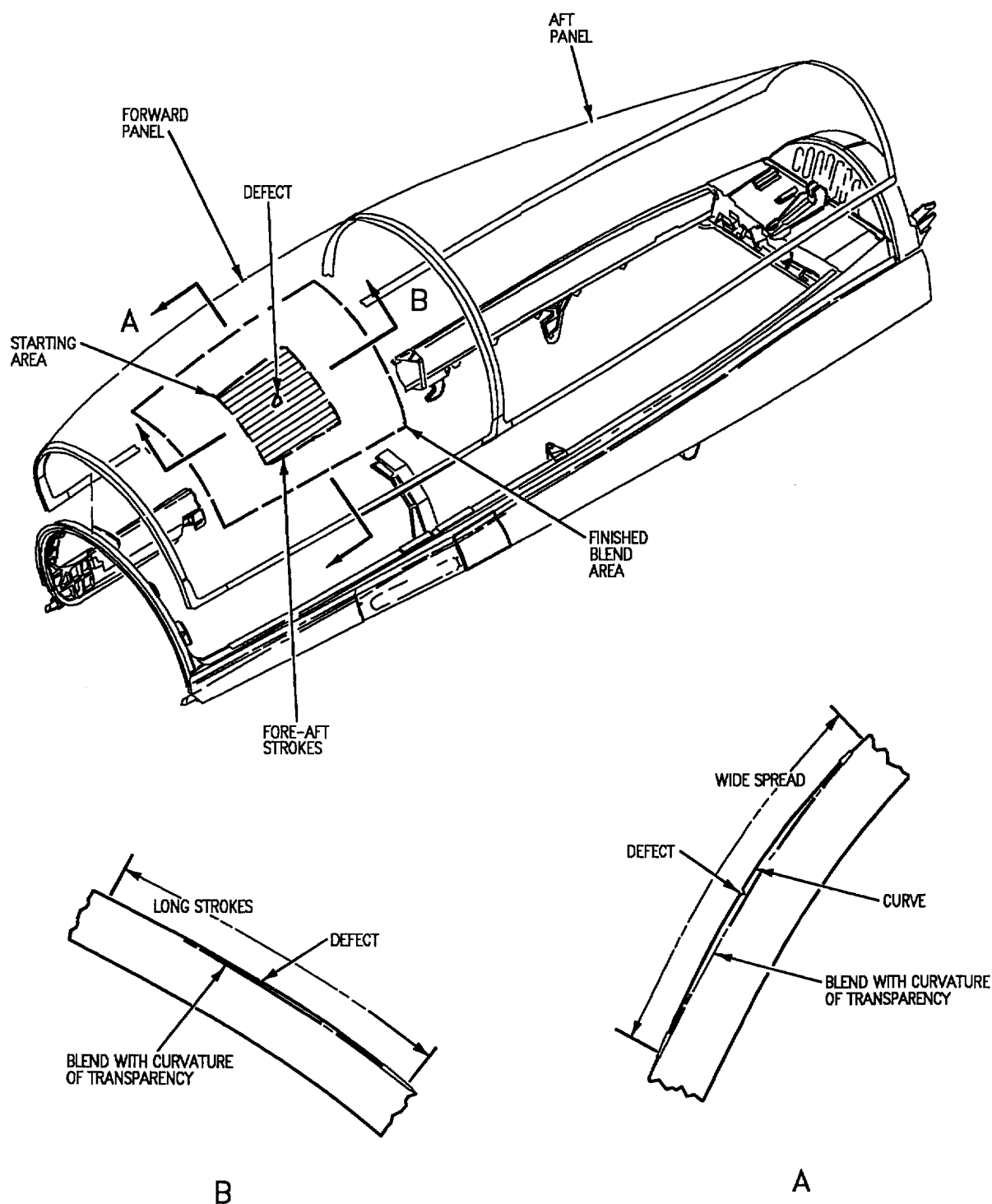


Figure 4. Canopy Transparency Adhesion Line

**Figure 5. Acrylic Transparency Polishing**

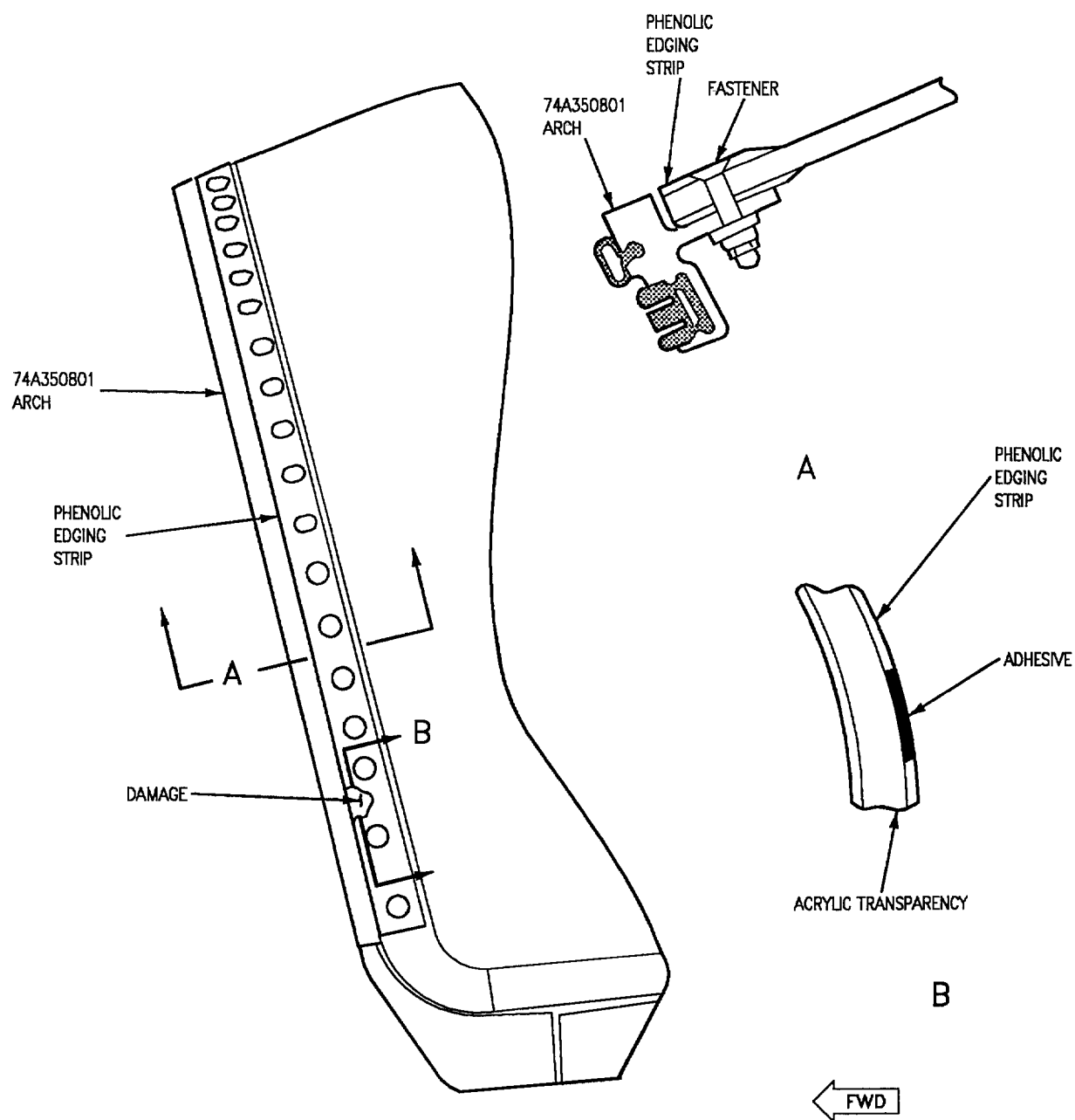


Figure 6. Installation of Repair Strap (Sheet 1)

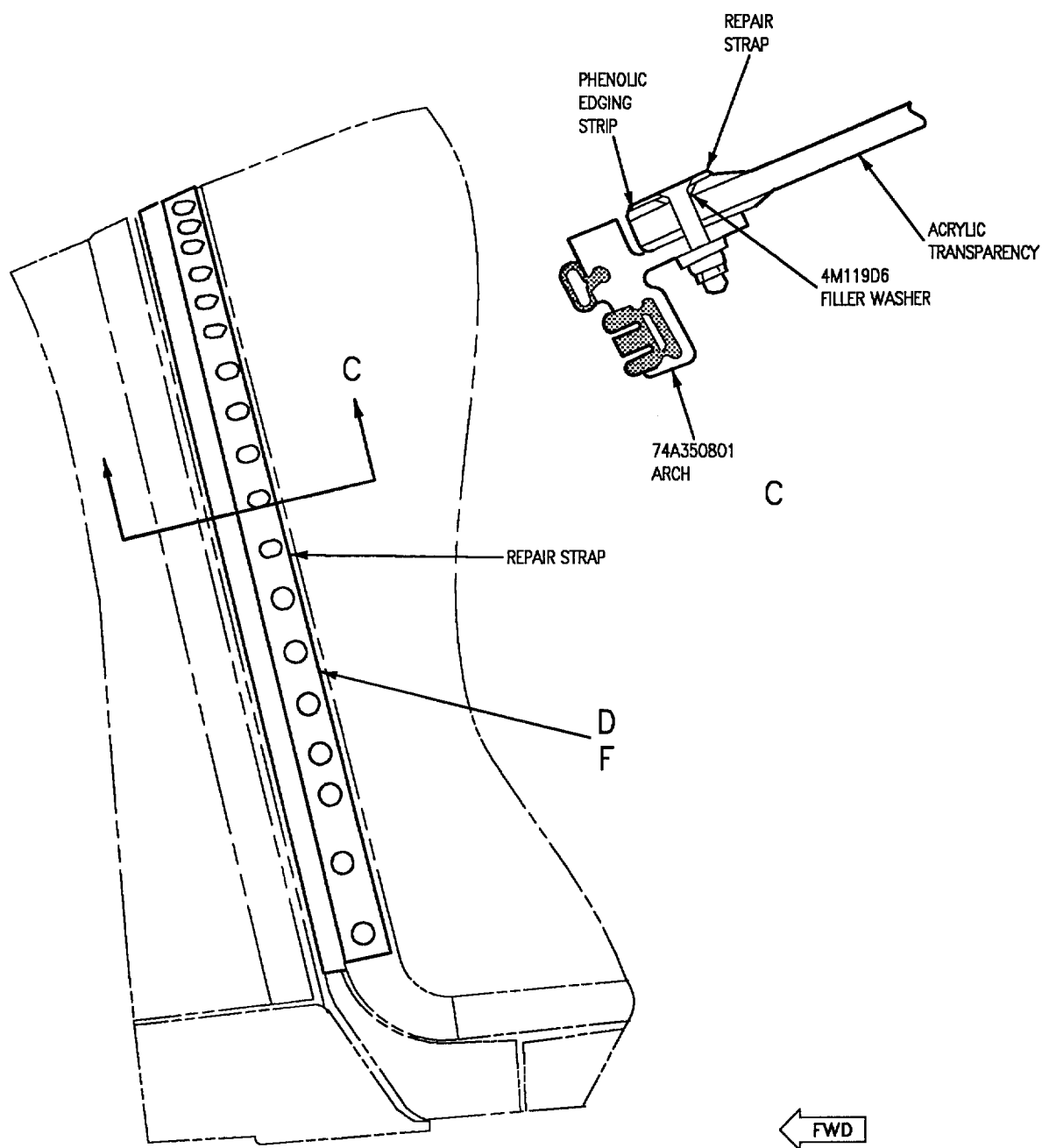


Figure 6. Installation of Repair Strap (Sheet 2)

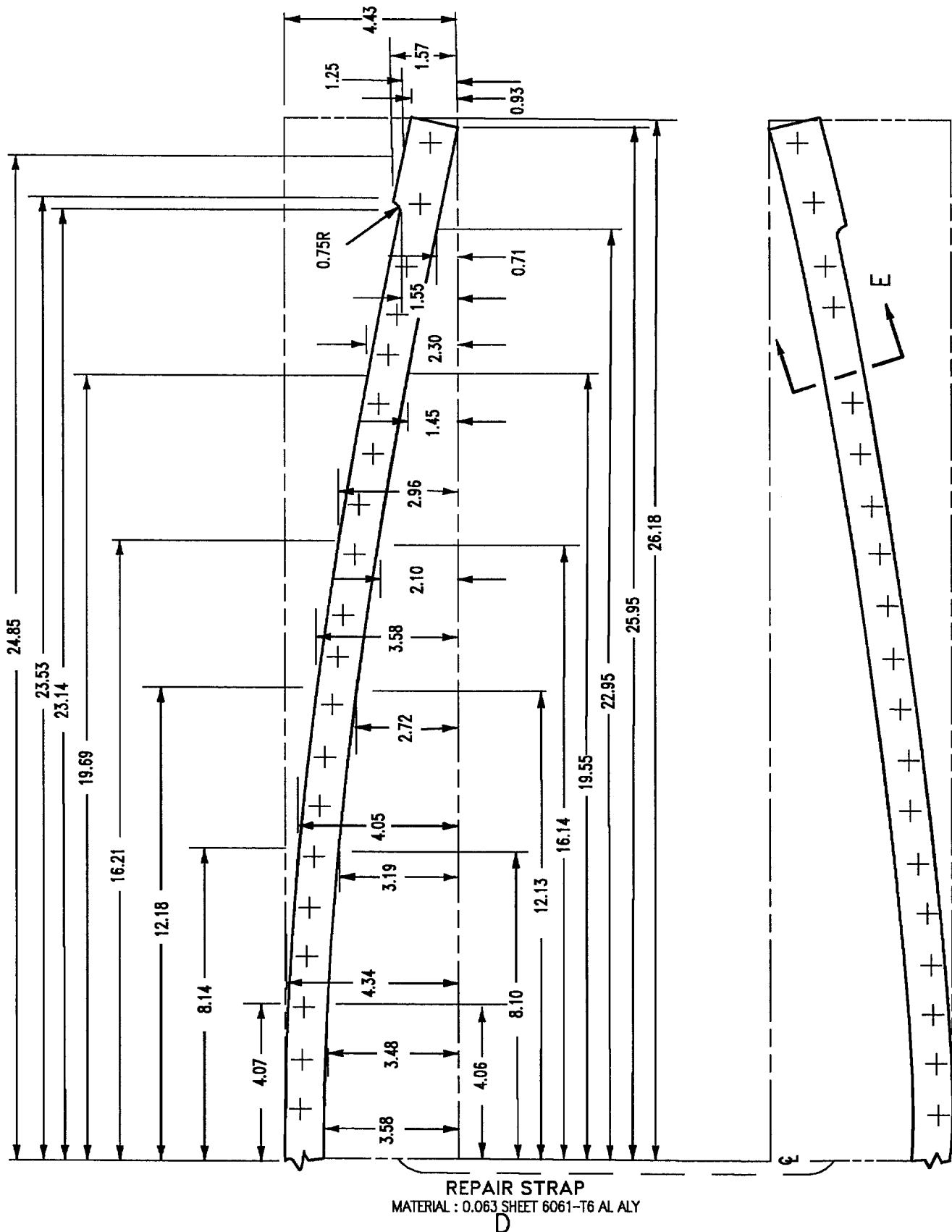


Figure 6. Installation of Repair Strap (Sheet 3)

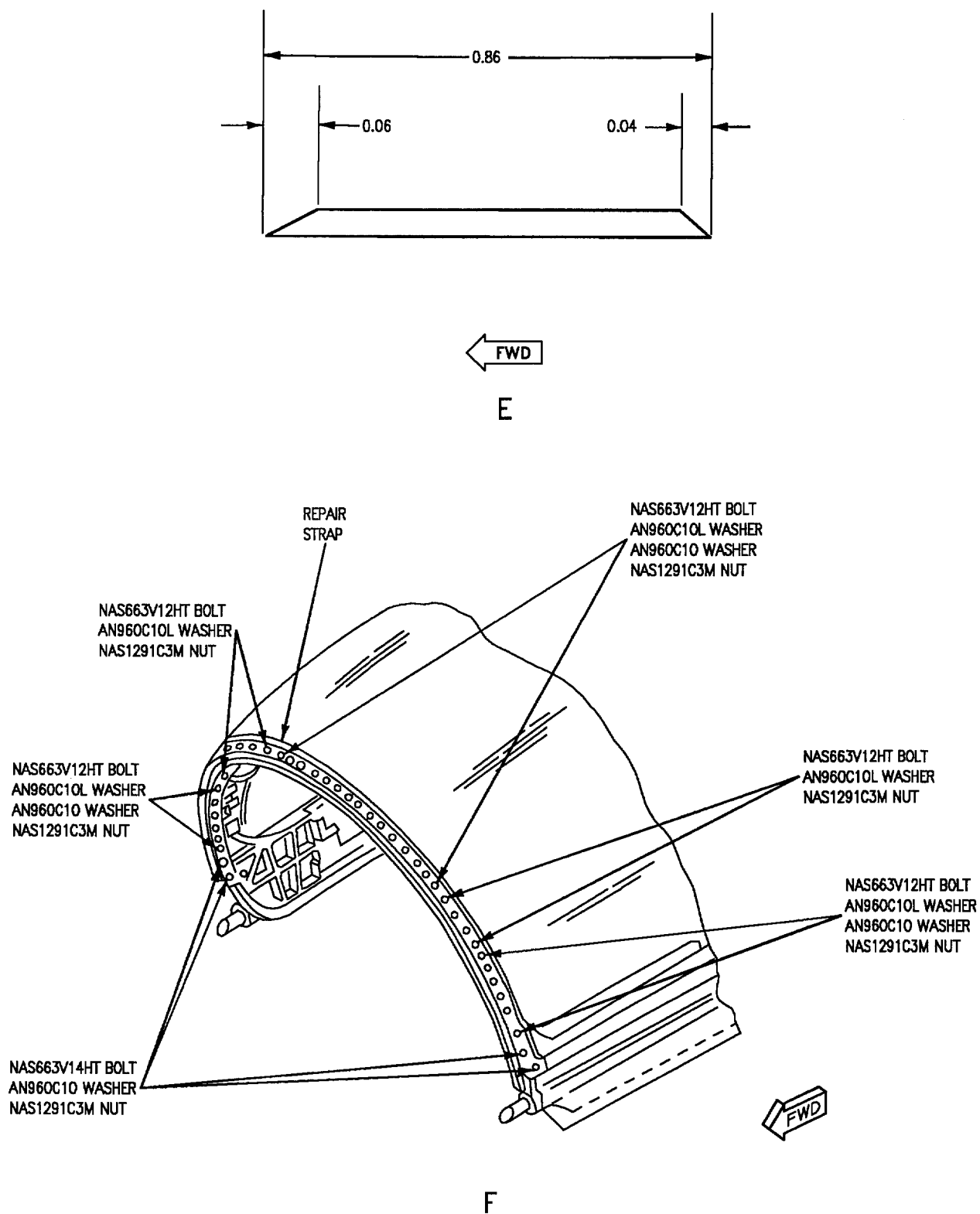


Figure 6. Installation of Repair Strap (Sheet 4)

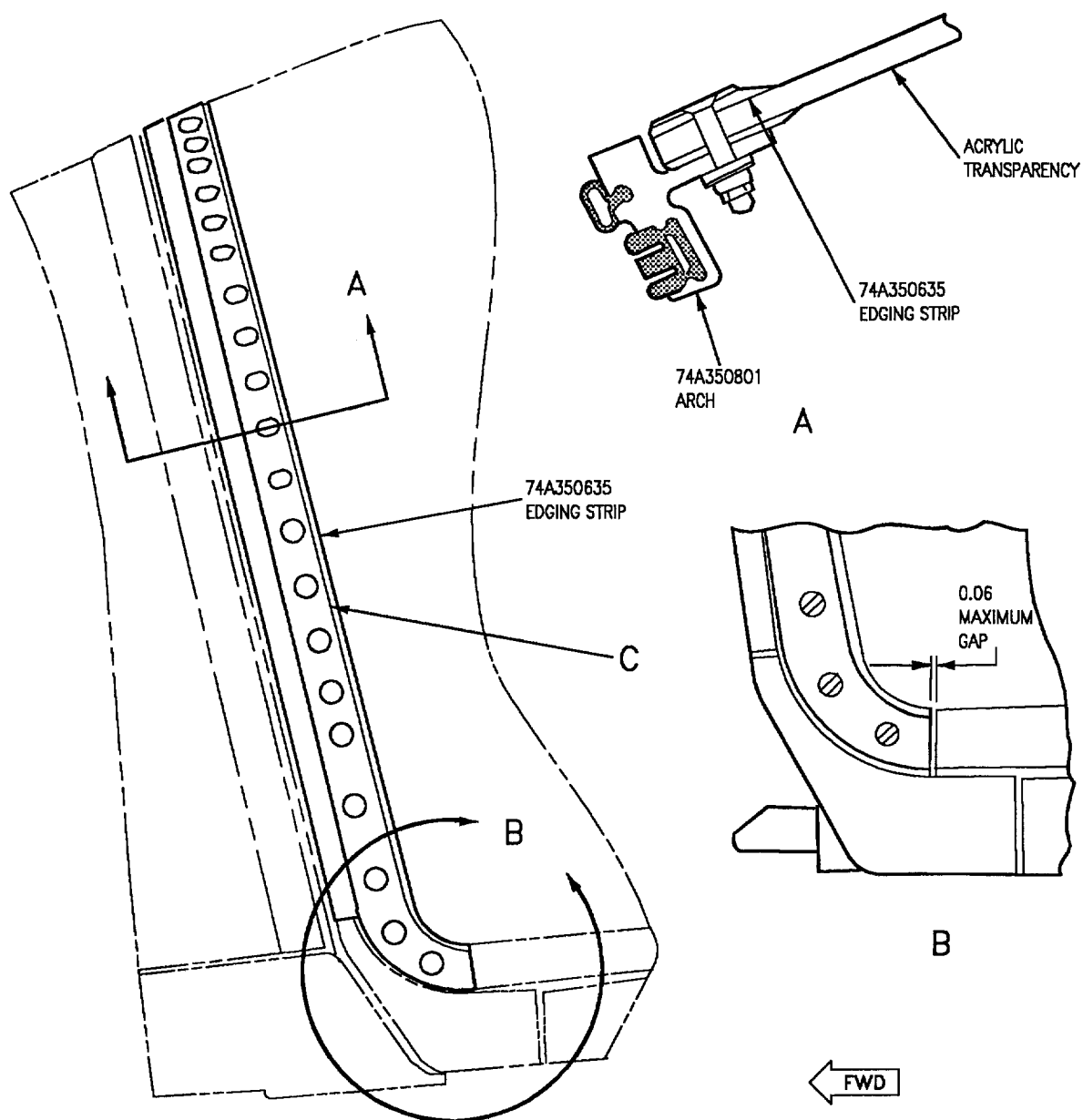


Figure 7. Installation of Edging Strip (Sheet 1)

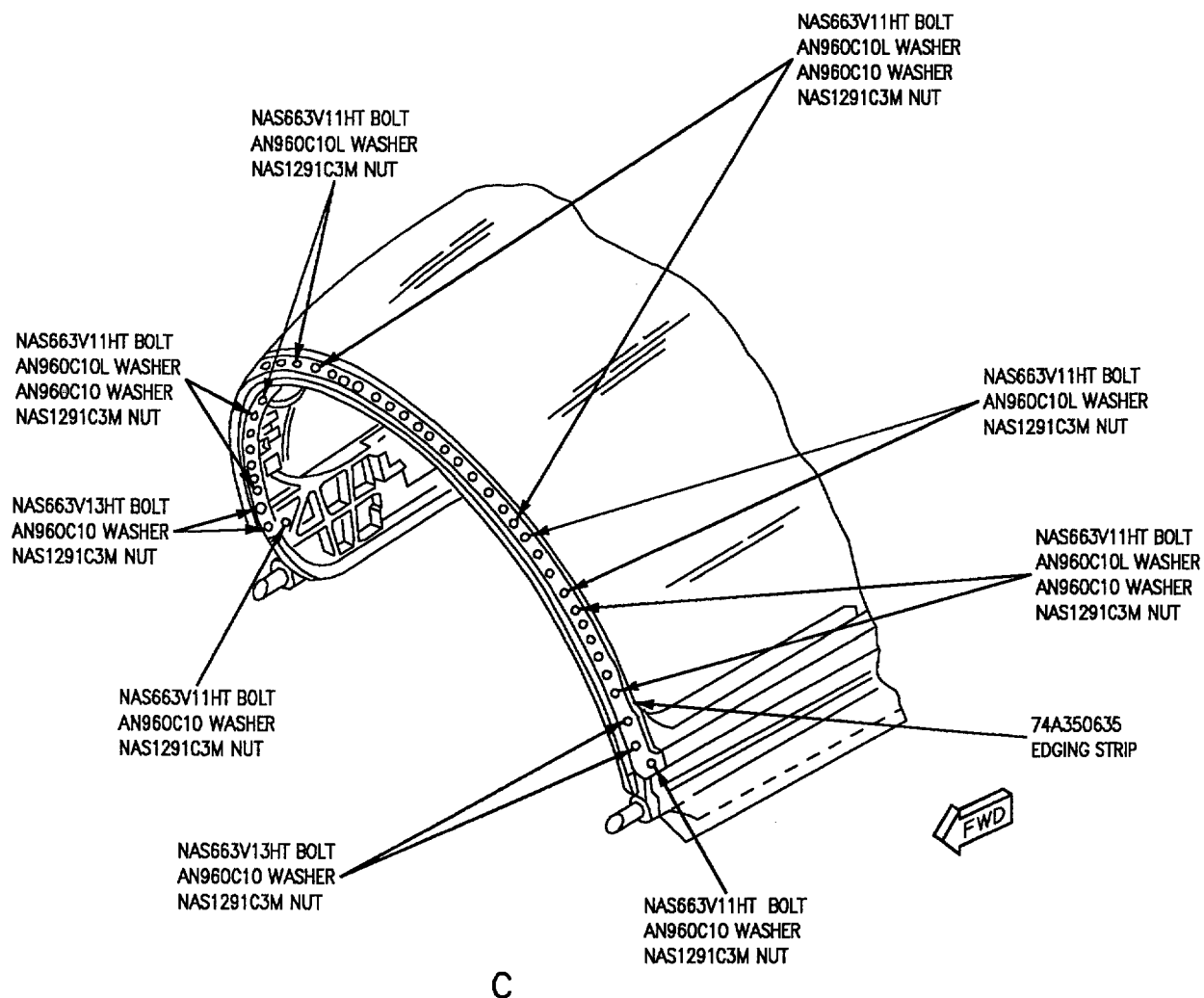


Figure 7. Installation of Edging Strip (Sheet 2)

DEPOT MAINTENANCE

STRUCTURE REPAIR

MAINTENANCE FIXTURE RE174350006

LOADING F/A-18B CANOPY

Reference Material

Seat, Canopy, Survival Equipment and Boarding Ladder	A1-F18AC-120-300
Canopy Pressure Seal	WP095 00
Canopy Weather Seal	WP096 00
Canopy Sling	WP109 00
Structure Illustrated Parts Breakdown, Forward Fuselage	A1-F18AC-SRM-420
Canopy, Movable - Pilot's, F/A-18B, Installation of	FIG 009 00

Alphabetical Index

Subject	Page No.
Leveling Fixture	1
Installing Canopy Into Fixture	6
Canopy Preparation	6
Fixture Preparation	6
Installing Canopy	6

Record of Applicable Technical Directives

None

1. LEVELING FIXTURE. See figure 1.

Materials Required

Support Equipment Required		Specification or Part Number	
Nomenclature	Part Number or Type Designation	Nomenclature	
		Quickset Plastic	RP1710
		Quickset Plastic Hardener	RP1135
Scale Adapter	TD1289N	a. Move fixture to a hard level surface by using an overhead hoist attached to four hoist rings (detail 312).	
Scale, Vernier	204		
Sight Level	545		
Stand	231		
Tooling Ball	TD1289R	b. Attach scale with scale adapter and tooling ball adapter to construction ball 1, 2, 3, 4, 5, and 6, detail A.	
Scale Adapters			

c. Position scales vertically and sight scales with optical sight level.

d. Adjust leveling feet (detail 102) by rotating clockwise or counterclockwise until scales attached to construction balls are in the same horizontal plane when viewed through optical sight level, detail B.



Quickset Plastic

22



Quickset Plastic Hardener

23

e. Secure threads of leveling feet (detail 102) and leveling pad (detail 101) to floor six places using quickset plastic, detail B.

f. Check alignment of fixture using AK174350006-1 alignment kit when one of the following conditions exist:

- (1) After leveling of fixture.
- (2) When fixture is moved.
- (3) When gage recycling is required.

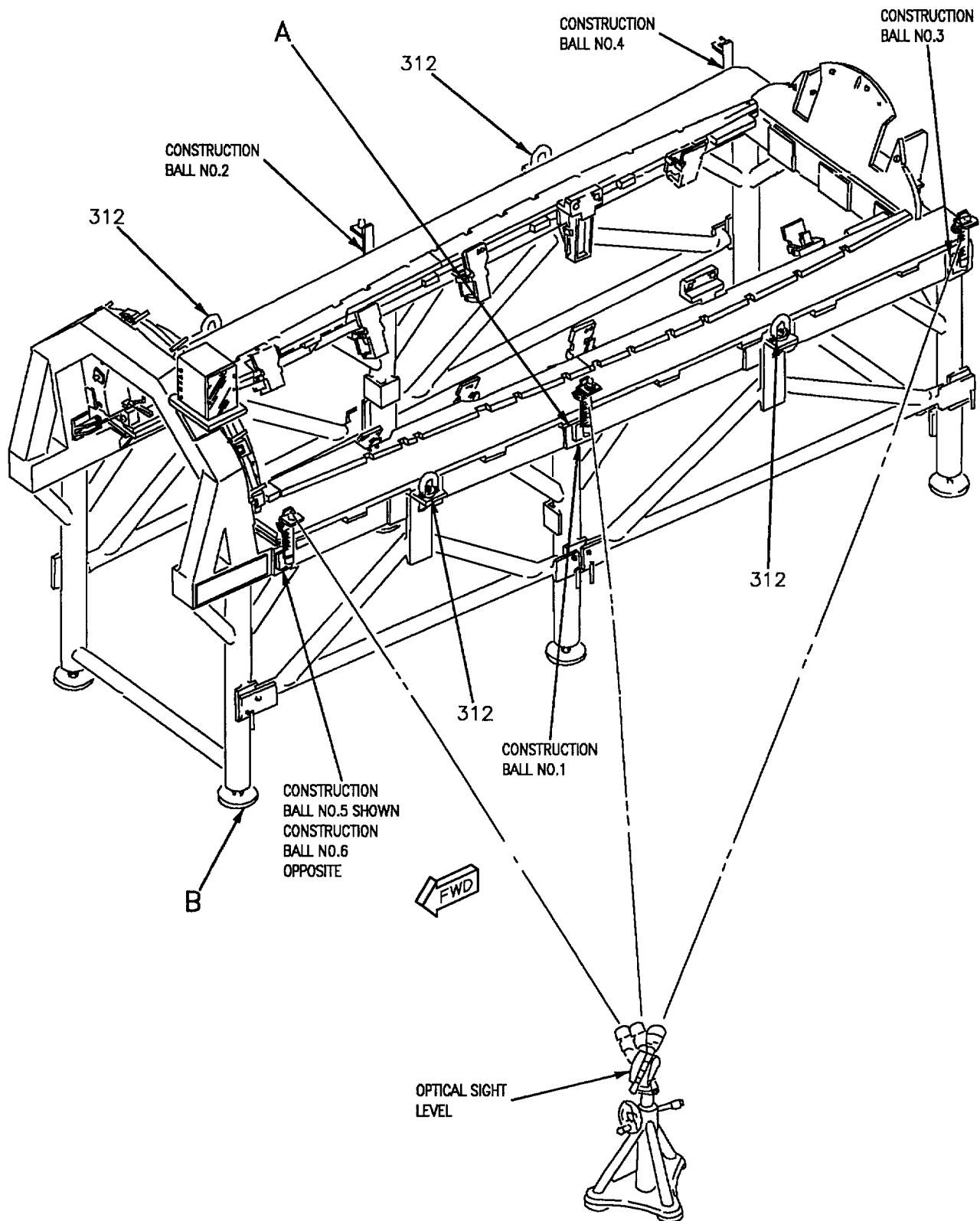


Figure 1. Fixture Leveling (Sheet 1)

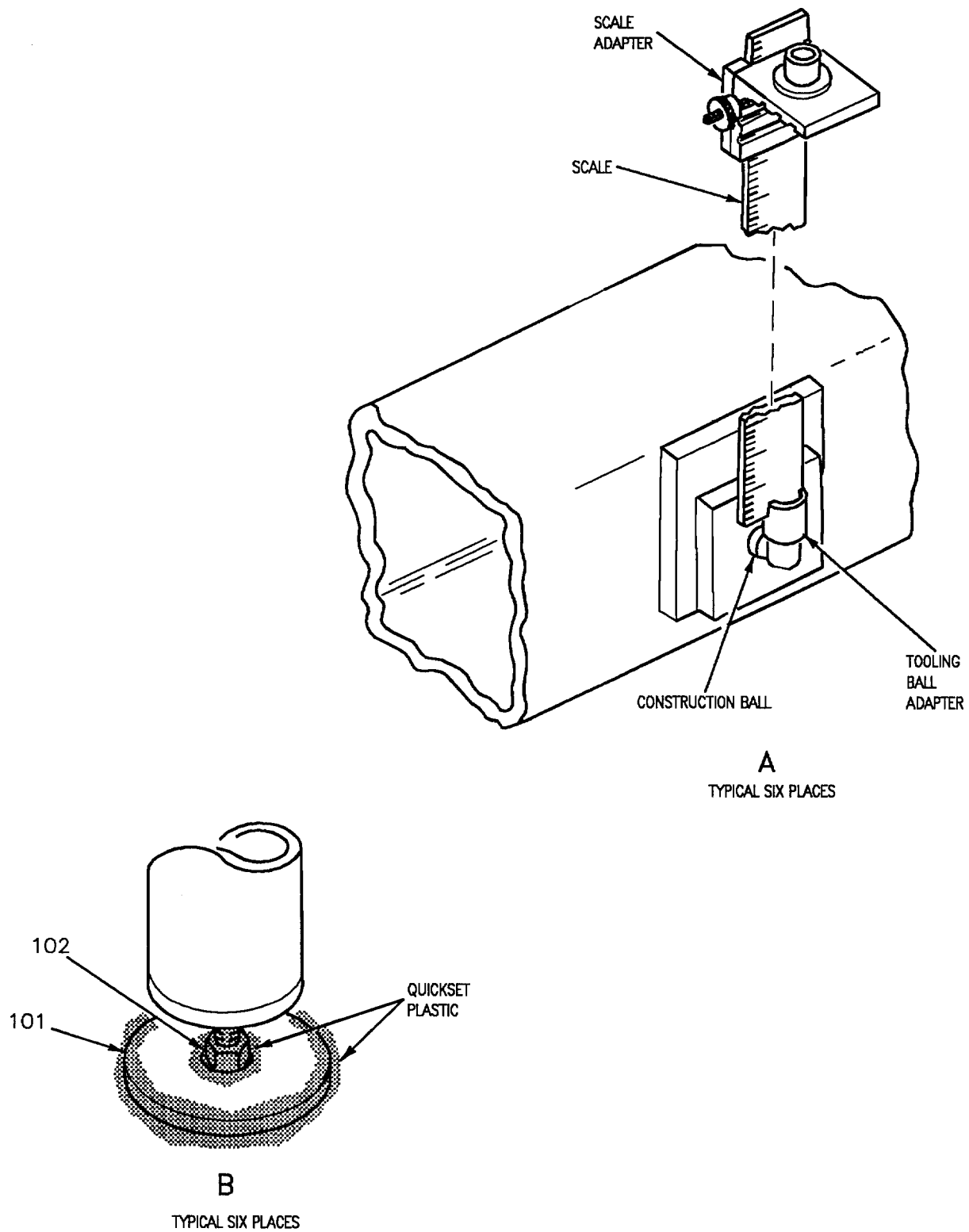


Figure 1. Fixture Leveling (Sheet 2)

DETAIL NO.	NAME	FUNCTION
101	Leveling pad	Pad that leveling feet rest on.
102	Leveling feet	Adjustment bolt used to level fixture.
312	Hoist rings	Supports fixture when hoisting.

Figure 1. Fixture Leveling (Sheet 3)

2. INSTALLING CANOPY INTO FIXTURE. See figure 2.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Canopy Hoisting - Handling Multiple Leg Sling	74D120020-1001
Portable Crane Hoisting Unit	1262AS100-1

Materials Required

Nomenclature	Specification or Part Number
Barrier Material	MIL-B-131, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-04-00x12x108
Tape, Pressure Sensitive	A-A-883, Type 1, 1 inch

3. FIXTURE PREPARATION.

- Remove or retract all details that would interfere with canopy during loading.
- Retract toggle clamps (detail A1) located nine places on casting (detail 105), detail A.
- Remove L-pin (detail 120) and retract T-pin (detail 110) nine places on casting (detail 105), detail A.
- Retract L-pin (detail 207), rotate locator pins (detail 321, 408, and 465) until roll pin (detail 521) points forward and aft 26 places, detail C.
- Lower locator pins (details 321, 408, and 465) as shown, detail E.

4. CANOPY PREPARATION.



Failure to place barrier material between transparency and polyethylene foam can cause damage to transparency.

- If transparency is serviceable and not to be replaced, do substeps below.

(1) Trim two pieces each of barrier material and polyethylene foam to fit entire area of transparency.

(2) Cover inner and outer surface of transparency placing barrier material between transparency and polyethylene foam.

(3) Secure polyethylene foam using pressure sensitive tape.

b. Remove canopy weather seal (A1-F18AC-120-300, WP096 00).

c. Remove canopy pressure seal (A1-F18AC-120-300, WP095 00).

d. Remove 74A350803 latch from 74A350814 frame by removing pin and collar, typical left and right side (A1-F18AC-SRM-420, FIG 009 00).

e. Remove 74A350719 bow handles (A1-F18AC-SRM-420, FIG 009 00).

5. INSTALLING CANOPY.

a. Install 74D120020-1001 canopy sling (A1-F18AC-120-300, WP109 00).

NOTE

Canopy sling should be adjusted to horizontal position for canopy loading.

- Position portable crane hoisting unit above canopy.
- Attach hook on hoisting unit to ring on canopy sling.



Personal injury and/or damage to canopy could occur with improper use of portable crane. Only lift canopy high enough to install canopy into fixture.

d. Fabricate two 10 x 10 inch foam blocks from polyethylene material and position on top forward surface of maintenance fixture.

e. Hoist canopy and align to maintenance fixture.

f. Slowly lower canopy into maintenance fixture by resting on foam blocks.

g. Remove 74D120020-1001 canopy sling and hoisting unit.

h. Remove foam blocks.

i. Engage T-pin (detail 110) to locating position and secure by inserting L-pin (detail 120), typical nine places, detail A.

j. Manually slide canopy assembly forward and locate canopy arch next to arch locators (detail 138), detail A.

k. Position hook end of locator (detail 217) over spacer (detail 214), detail F.

l. Insert spacer (detail 215) in slot at aft end of 74A350835 hinges, detail F.

m. Position backing plate (detail 474) on inboard surface of hinges inserting pins (details 216, 477) into hinge support (detail 25, 26), detail F.

n. Install thumb screw (detail 476) to secure backing plate (detail 474), detail F.

o. Install step pin (detail 348) through hinge support (detail 25, 26) into 74A350835 hinges, detail F.

p. Tighten thumb screw (detail 475) to hold assembly in place, detail F.

q. Maintain equal gap between locators (detail 217) and 74A350835 hinges, detail J.

r. Install hinge locator (detail 90, 91) by inserting dowel pin (detail 460) into bushing and secure by installing handknob (detail 459), detail F.

s. Check for 0.125 inch nominal gap between hinge location button (detail 458) and 74A350835 hinge, detail G.

t. Insert recycle pin (detail 531) through latch pin locators (detail 80, 81) into 74A350814 forward corner frame section, detail K.

u. Engage toggle clamp (detail A1) against 74A350801 forward arch fitting nine places, detail A.

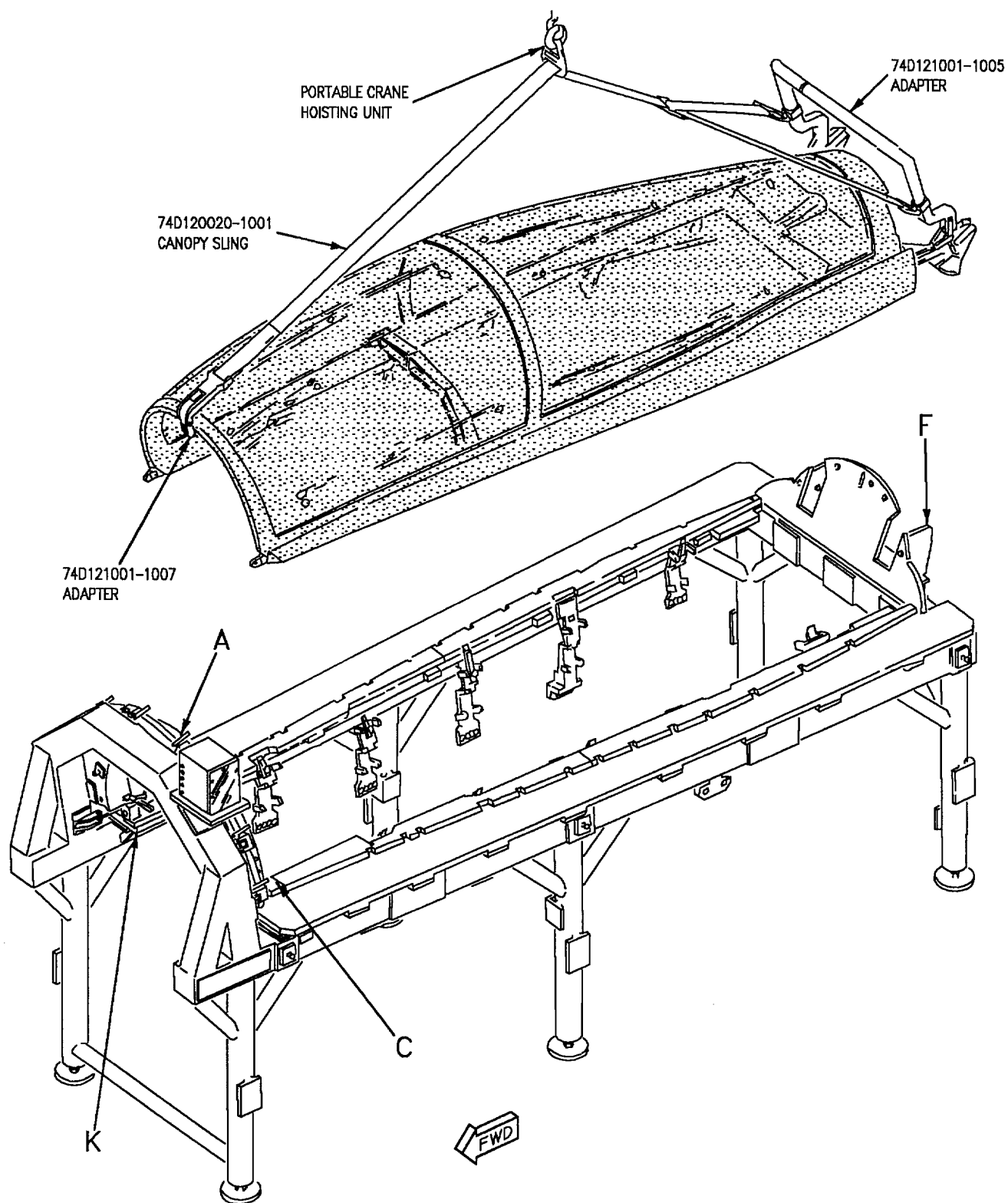


Figure 2. Installing Canopy (Sheet 1)

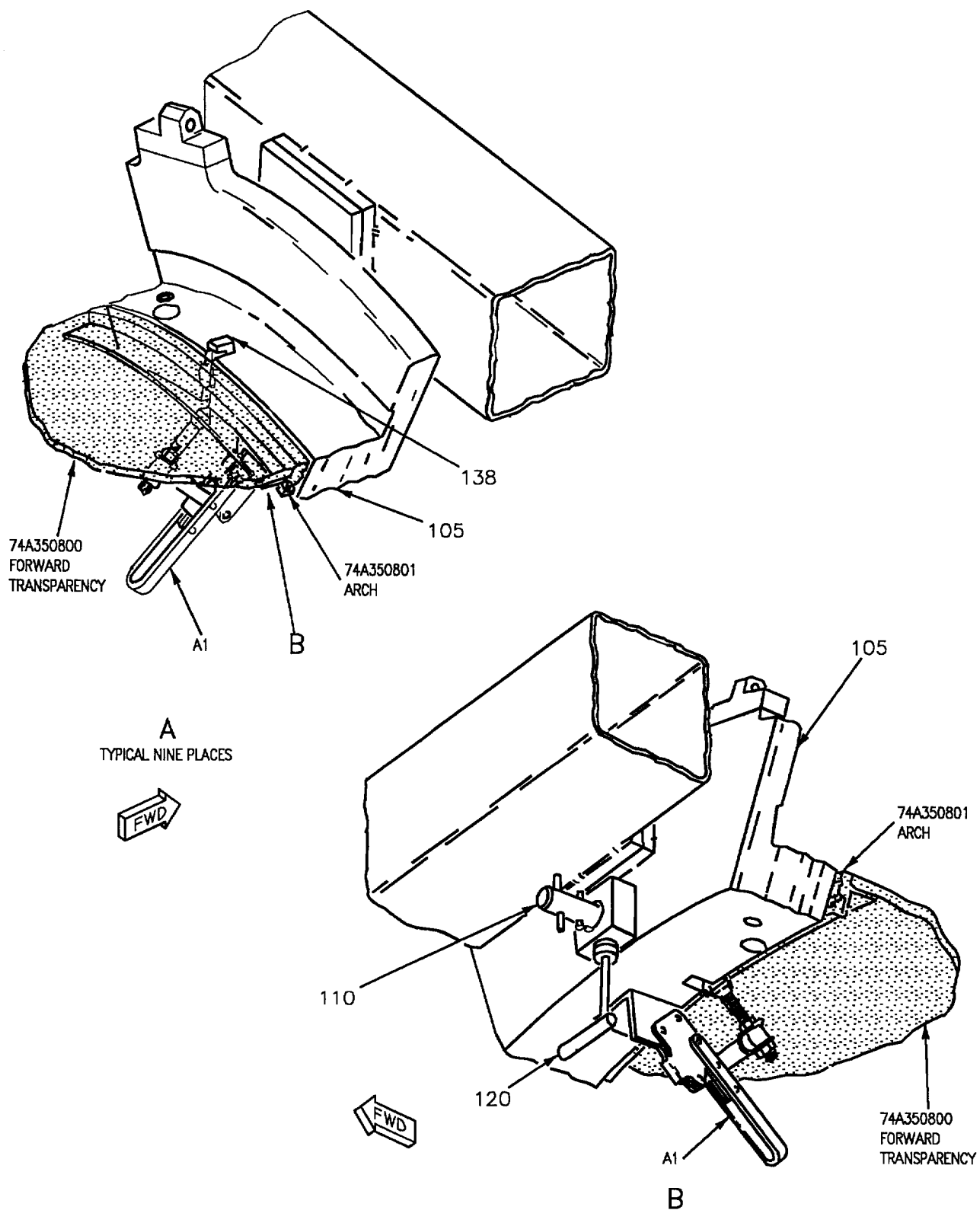
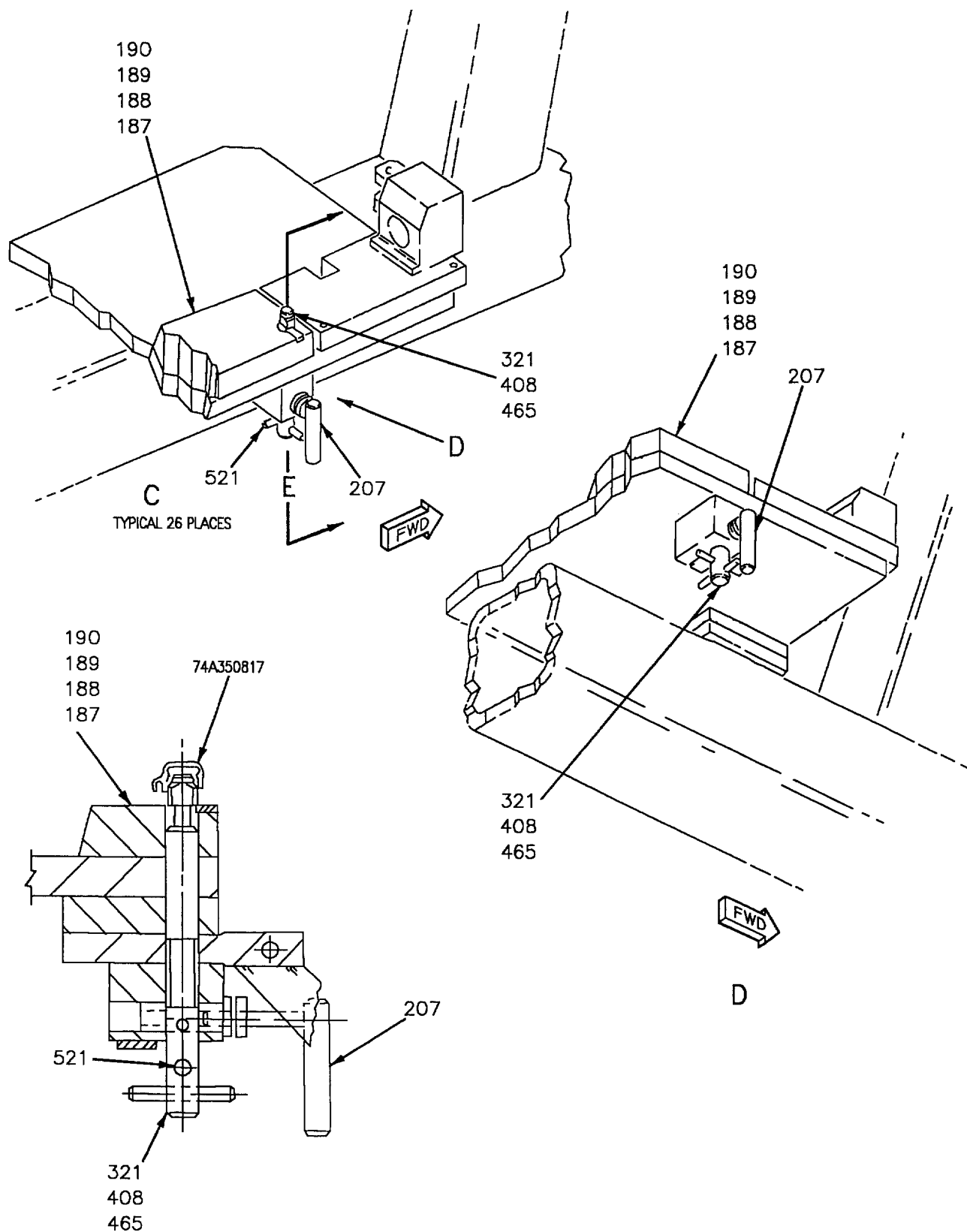


Figure 2. Installing Canopy (Sheet 2)



E Figure 2. Installing Canopy (Sheet 3)

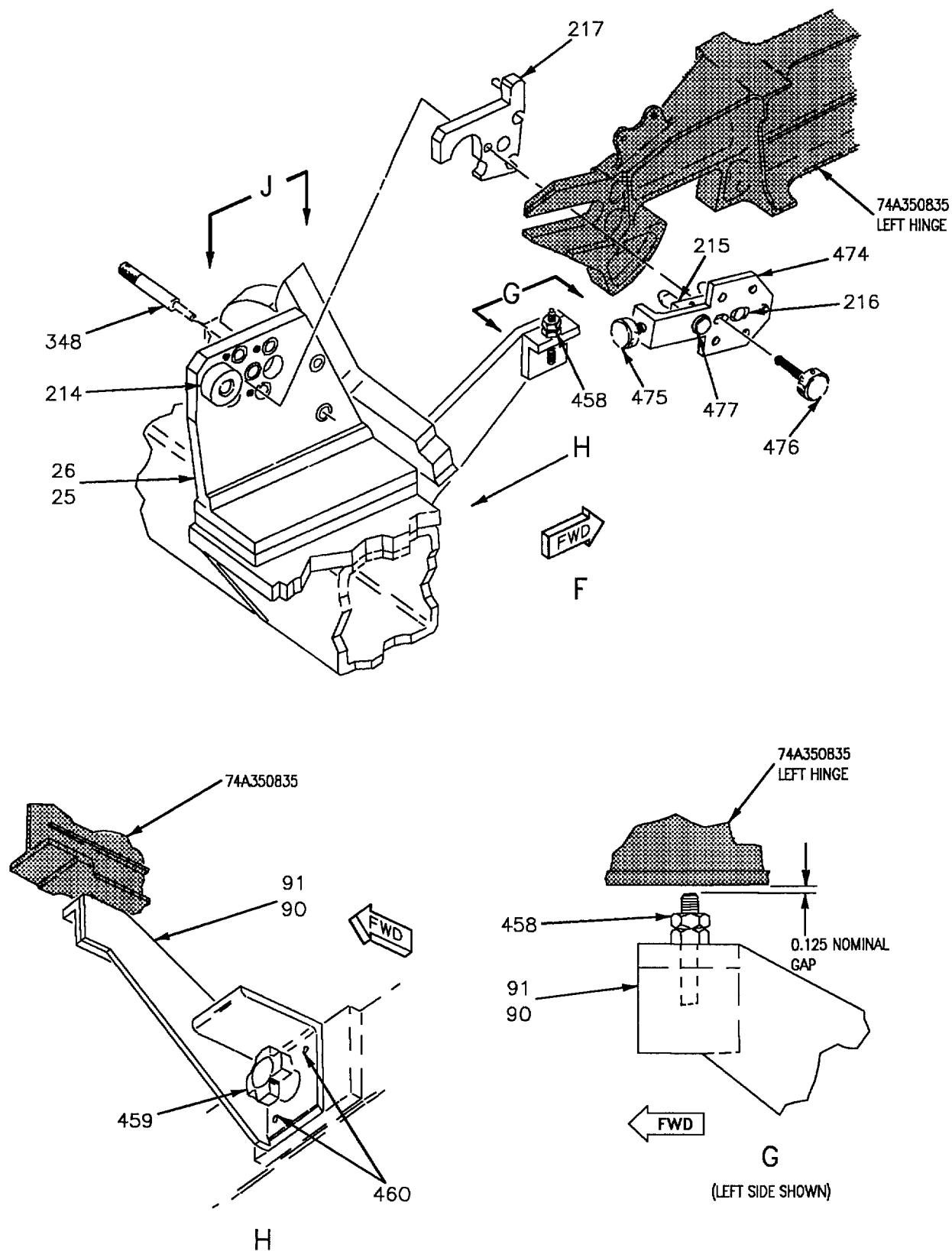
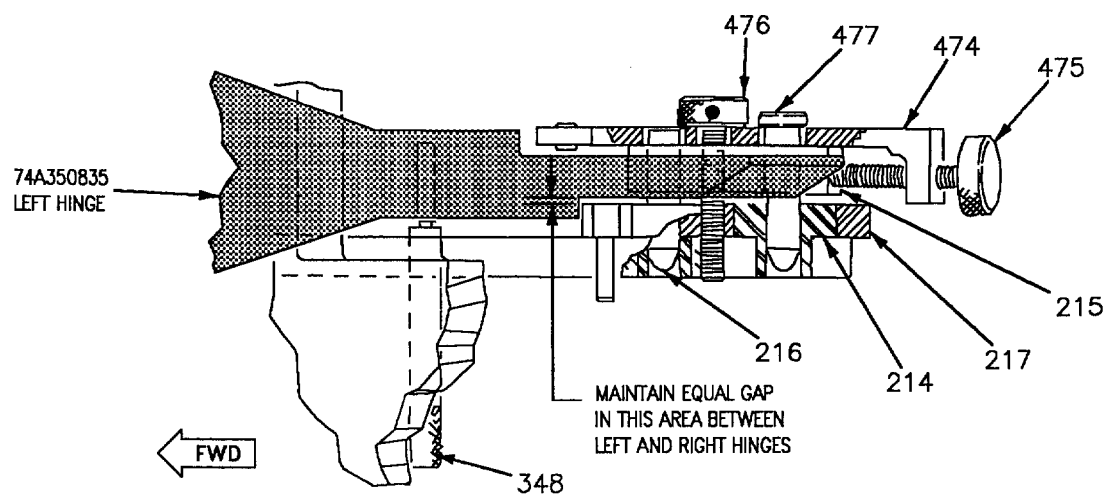
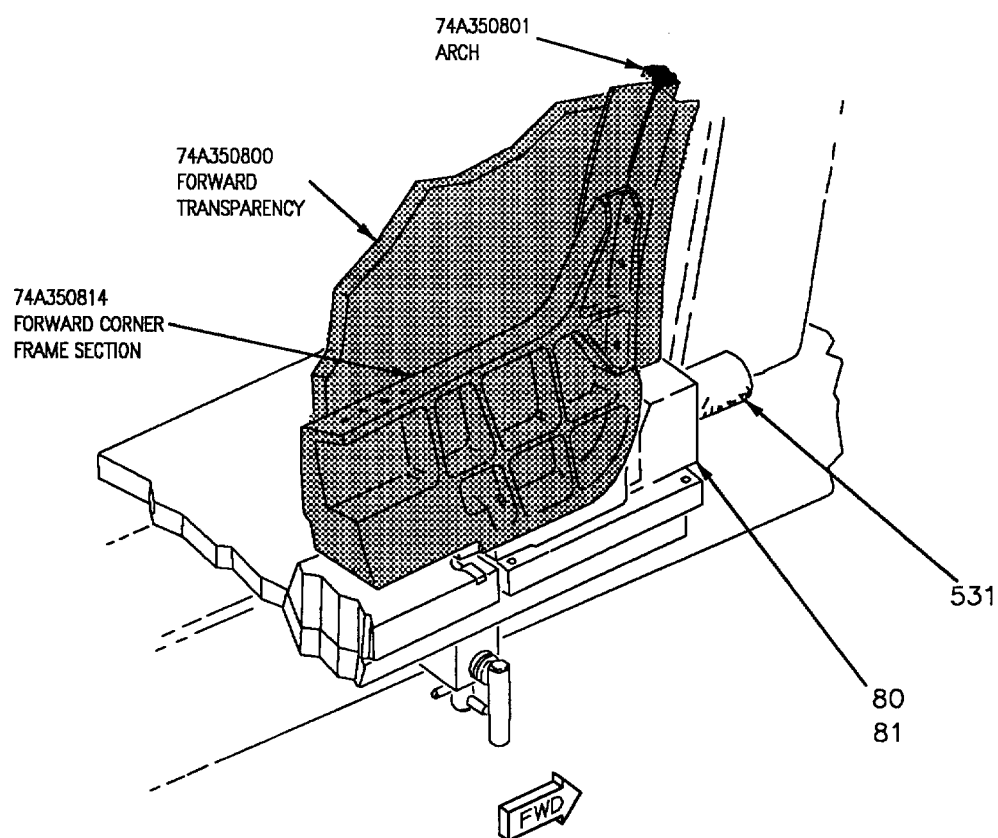


Figure 2. Installing Canopy (Sheet 4)



J



K

Figure 2. Installing Canopy (Sheet 5)

DETAIL NO.	NAME	FUNCTION
A1	Toggle clamp	Secure 74A350801 canopy arch to arch locators (detail 138).
25	Hinge support	Provides attachment points for hinge locators, left side.
26	Hinge support	Provides attachment points for hinge locators, right side.
80	Latch pin locator	Provides L/H locating position for 74A350803 latch.
81	Latch pin locator	Provides R/H locating position for 74A350803 latch.
90	Hinge locator	Provides 0.125 inch nominal gap inspection for 74A350835 hinge, left side.
91	Hinge locator	Provides 0.125 inch nominal gap inspection for 74A350835 hinge, right side.
105	Casting	Contains various details for clamping, inspecting and locating 74A350801 canopy arch.
110	T-pin	Supports and positions arch locator (detail 138).
120	L-pin	Retains T-pin (detail 110) in position.
138	Arch locator	Locates 74A350801 canopy arch on casting (detail 105).
187	Sill reference plane	Simulates canopy sill, forward left side.
188	Sill reference plane	Simulates canopy sill, forward right side.
189	Sill reference plane	Simulates canopy sill, aft left side.
190	Sill reference plane	Simulates canopy sill, aft right side.
207	L-pin	Secures locator pin (detail 321) in position.
214	Spacer	Position locator (detail 217) and provides pinning location for pin (detail 477).
215	Spacer	Inserts into slot of 74A350835 hinge.
216	Pin	Locates backing plate (detail 474).
217	Locator	Provides equal gap reference between 74A350835 hinge and locator.
321	Locator pin	Locates 74A350817 side seal retainer.
348	Step pin	Provides 0.125 inch nominal gap or net reference for inspecting or locating hinge.

Figure 2. Installing Canopy (Sheet 6)

DETAIL NO.	NAME	FUNCTION
408	Locating pin	Locates 74A350817 side seal retainer.
458	Locating button	Provides 0.125 inch nominal gap inspection for 74A350835 hinge.
459	Handknob	Secures hinge locator (detail 90, 91) to frame.
460	Dowel pin	Locates hinge locator (detail 90, 91) to frame.
465	Locator pin	Locates 74A350817 side seal retainer.
474	Backing plate	Locates 74A350835 hinge to hinge support (detail 25, 26).
475, 476	Thumb screw	Secures 74A350835 hinge to hinge support (detail 25, 26).
477	Pin	Locates backing plate (detail 474).
521	Roll pin	Used as a directional indicator for locator (detail 321).
531	Recycle pin	Locates and/or secures 74A350814 forward corner frame section.

Figure 2. Installing Canopy (Sheet 7)

DEPOT MAINTENANCE**STRUCTURE REPAIR****F/A-18B CANOPY COMPONENT REPLACEMENT**

Reference Material

Maintenance Fixture, RE174350006, Loading F/A-18B Canopy	WP006 01
F/A-18B Canopy Transparency Removal, Installation, and Replacement	WP006 03
Aircraft Corrosion Control	A1-F18AC-SRM-500
Windshield, Canopy, and Cockpit Finish System	WP021 00
Line Maintenance Access Doors	A1-F18AC-LMM-010
Seat, Canopy, Survival Equipment and Boarding Ladder	A1-F18AC-120-300
Canopy Jettison Rocket Motor	WP067 00
Structure Repair, General Information	A1-F18AC-SRM-200
Locating Blind Holes and Trim Lines	WP004 03
Oversize Fasteners	WP004 07
Accessory Kits and Spray Mist Coolant Tank	WP004 16
Drilling Machines	WP004 17
Adhesive, Cement, and Sealant; Preparation and Application	WP011 00

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Record of Applicable Technical Directives

None

1. **ARCH, 74A350801, INSPECTION AND REPLACEMENT.** See figure 1.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, F/A-18B Canopy	RE174350006-1
Repair Kit, Canopy	RE274350006-1

Materials Required

Nomenclature	Specification or Part Number
Adhesive	RTV-106
Barrier Material	MIL-B-131, Class 1
Cheesecloth	CCC-C-440, Type 1, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108
Methyl Isobutyl Ketone	D1153
Sealing Compound	MIL-S-83430, Class A-1/2
Tape, Pressure Sensitive	A-A-883, Type 1, 1 inch

2. **INSPECTION.**

- a. Load canopy into fixture (WP006 01).
- b. Retract toggle clamps (detail A1) nine places, detail A.

c. Engage arch locators (detail 138) by removing L-pins (detail 120) and sliding T-pins (detail 110) aft; reinstall L-pins (detail 120), typical nine places, detail A and B.

d. Insert 0.125 inch feeler gage between arch and arch locators (detail 138) to check mold line location of arch, typical nine places, detail C.

e. Retract arch locators (detail 138) by removing L-pins (detail 120) and sliding T-pins (detail 110) forward; typical nine places, detail C and D.

f. Using GO, NO-GO gage (detail 524), inspect for twist and Y plane location by inserting GO end of gage between arch and aft face of arch base (detail 105), detail H.

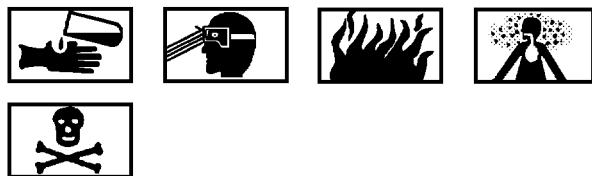
g. Arch must be replaced if NO-GO end of gage (detail 524) can be inserted anywhere between arch and aft face of arch base (detail 105), detail H.

3. **REPLACEMENT.**



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam. See canopy preparation (WP006 01).

- a. Remove forward transparency (WP006 03).
- b. Remove fasteners attaching arch to 74A350814 side frame. See figure 2 for fastener location.
- c. Remove damaged arch.



Methyl Isobutyl Ketone

10

d. Clean all residual sealant from mating structure with plastic scraper and cheesecloth moistened with solvent.

e. Engage arch locators (detail 138) by removing L-pins (detail 120) and sliding T-pins (detail 110) aft; reinstall L-pins (detail 120), typical nine places, detail A and B.

f. Position new arch against arch locators (detail 138).

g. Insert 0.125 inch shim between arch and arch locators (detail 138) to establish mold line location, typical nine places, detail C.

h. Rotate arch to maintain best gap condition to 74A350814 side frame.

i. Clamp arch against arch locators (detail 138) using toggle clamps (detail A1), typical seven places, detail C and D.



Adhesive

12

j. Bond 74A350006 silicone rubber strip to arch using adhesive RTV-106.

NOTE

If both arch and 74A350814 side frame are being replaced, do step l.

k. Locate arch to 74A350814 side frame per sub-steps below:

NOTE

74A350847 shims are installed only when needed to maintain correct fit between arch and 74A350814 side frame.

(1) Insert 74A350847 shims as required, detail E and F.



Sealing Compound

7

(2) Lay surface seal all mating surfaces between arch 74A350847 shims, 74A350814 side frame, and 74A350008 radius block (A1-F18AC-SRM-200, WP011 00).

(3) Secure arch to 74A350814 side frame with toggle clamps (detail A1), typical two places, detail G.

(4) Locate and drill five 0.1895 +0.0025 -0.0000 inch diameter holes into arch from 74A350814 side frame, typical L/R.

(5) Countersink holes in arch to flushness requirements of fastener.

(6) Wet install fasteners, see figure 2 and (A1-F18AC-SRM-200, WP011 00).

l. If both arch and 74A350814 side frame are being replaced, do substeps below:

(1) Do steps k(1) through k(3).

(2) Install traveler bushing (detail 94) at hole locations 379, 380, 381, and 382 located in arch base (detail 105), detail G.

(3) Drill 0.1895 +0.0022 -0.0000 inch diameter holes.

(4) Countersink holes in arch to flushness requirements of fastener.

(5) Wet install fasteners, see figure 2 and (A1-F18AC-SRM-200, WP011 00).

m. At hole location 1 through 41:

(1) Temporarily install forward transparency with enough fasteners to hold in correct position (WP006 03).

NOTE

If oversize fasteners were used in existing transparency, use traveler bushing (detail P1 or R1) to drill pilot holes in arch.

(2) Insert traveler bushing (detail K1) into existing holes of transparency, detail A.

(3) Drill 0.1285 inch diameter pilot holes.

(4) Remove forward transparency (WP006 03).

(5) Open pilot holes to 0.195 +0.007 -0.000 inch diameter nominal size or drill oversize as required to match existing hole in transparency.

n. Install forward transparency (WP006 03).

o. Remove canopy from tool.

p. If both arch and 74A350814 side frame were replaced, dimensionally locate lower L/R holes. See figure 2 and substeps below:

(1) Drill 0.1895 +0.0022 -0.0000 inch diameter holes.

(2) Countersink holes to flushness requirements of fastener.

(3) Wet install fasteners, see figure 2 and (A1-F18AC-SRM-200, WP011 00).

q. Install 74A350719 bow handles, 74A350723 supports, and 74A350008 angles on arch. See figure 2, detail B and substeps below:

(1) Dimensionally lay out hole pattern.

(2) Drill holes to diameter specified on figure.

(3) Countersink holes to flushness requirement of fasteners.

(4) Wet install fasteners, see figure 2 and (A1-F18AC-SRM-200, WP011 00).

r. Apply finish system as required (A1-F18AC-SRM-500, WP021 00).

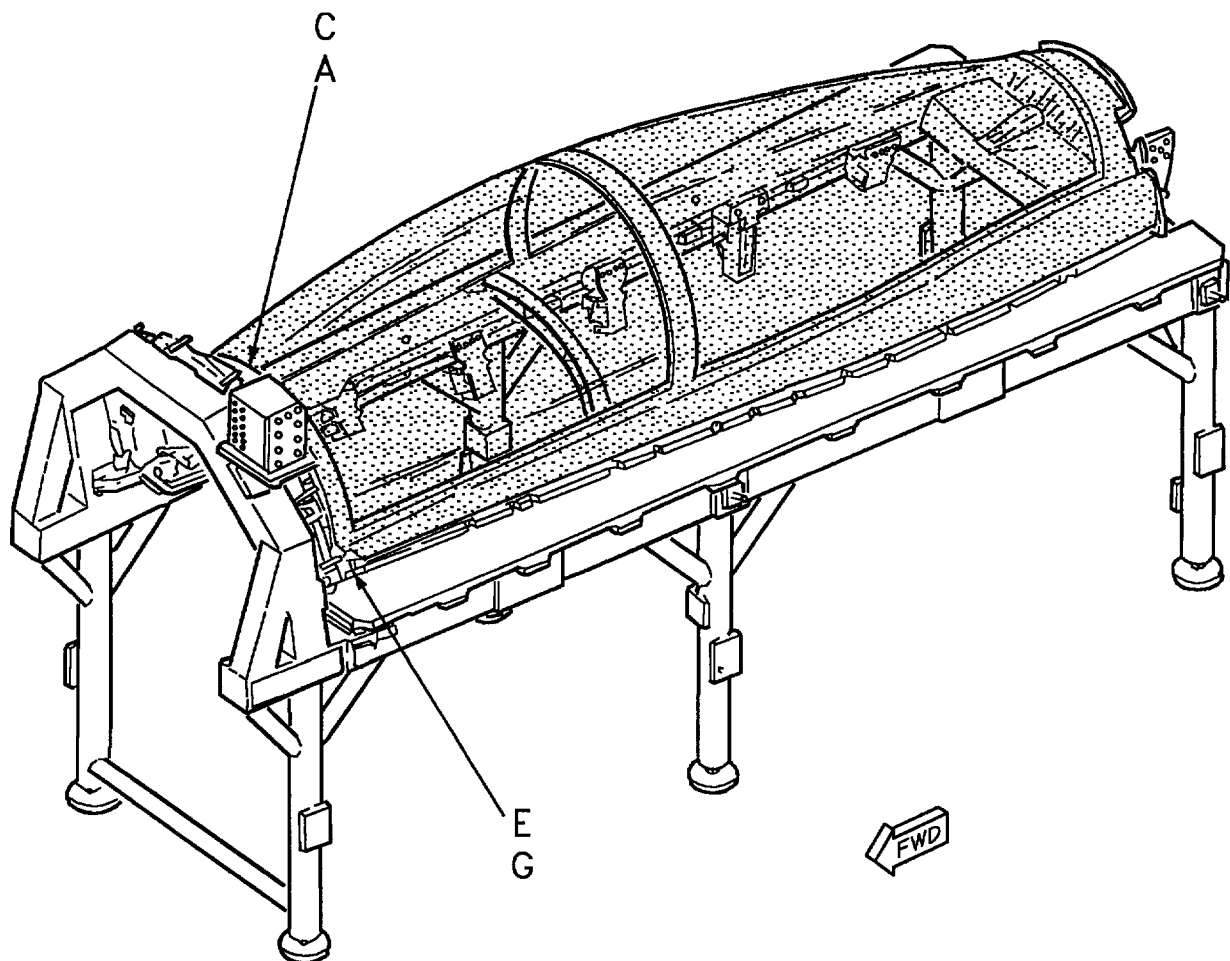


Figure 1. Inspection or Replacement - Arch (Sheet 1)

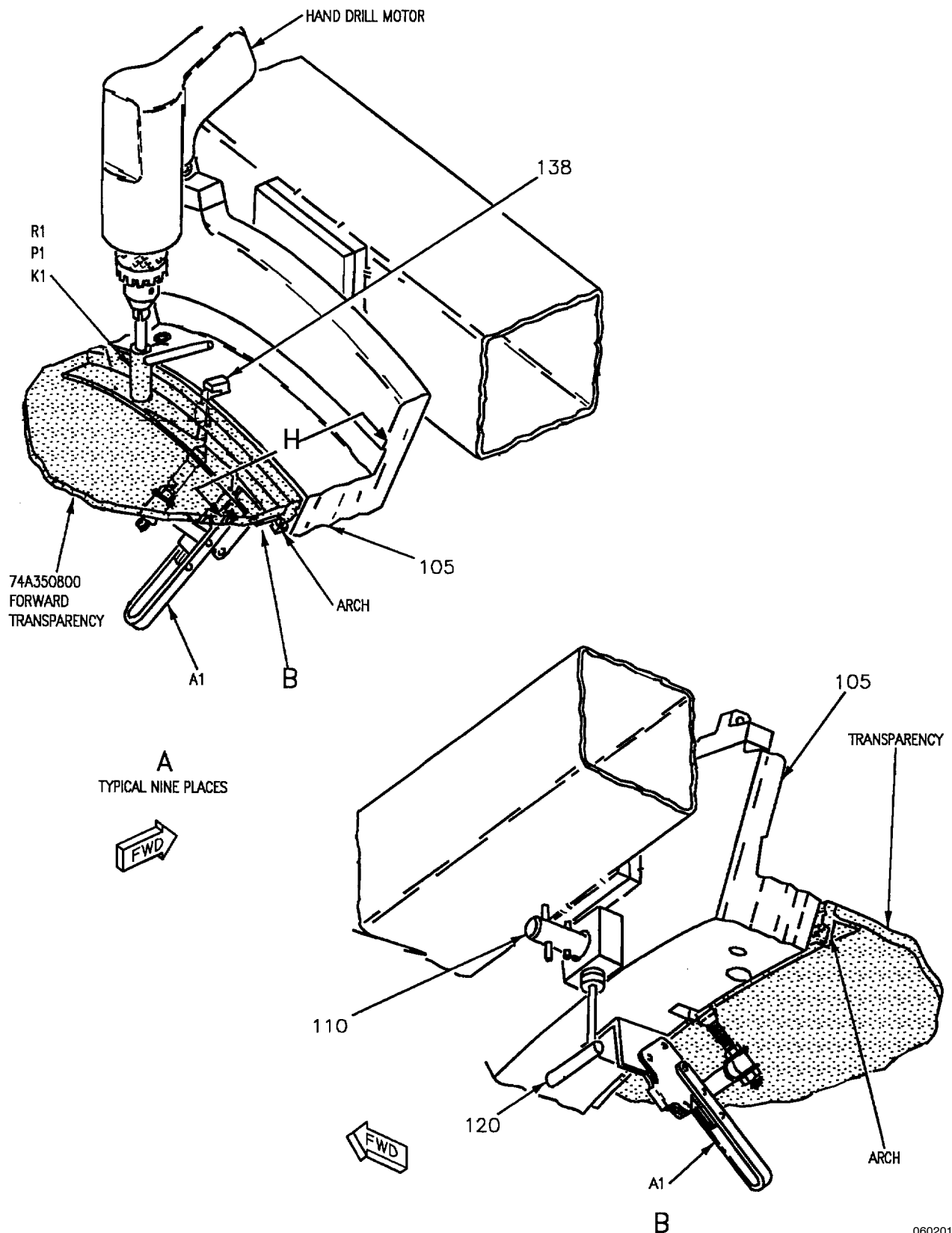


Figure 1. Inspection or Replacement - Arch (Sheet 2)

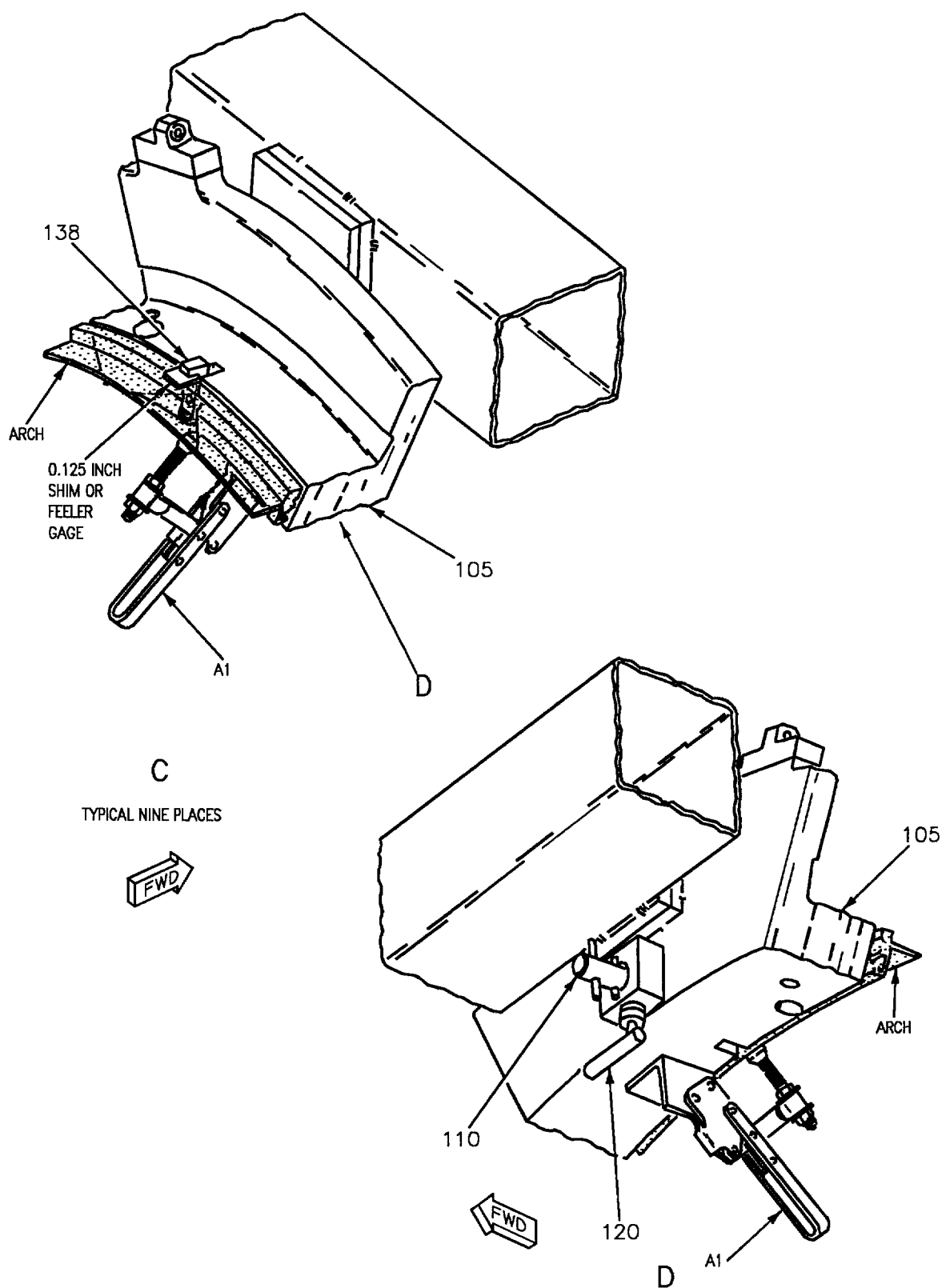
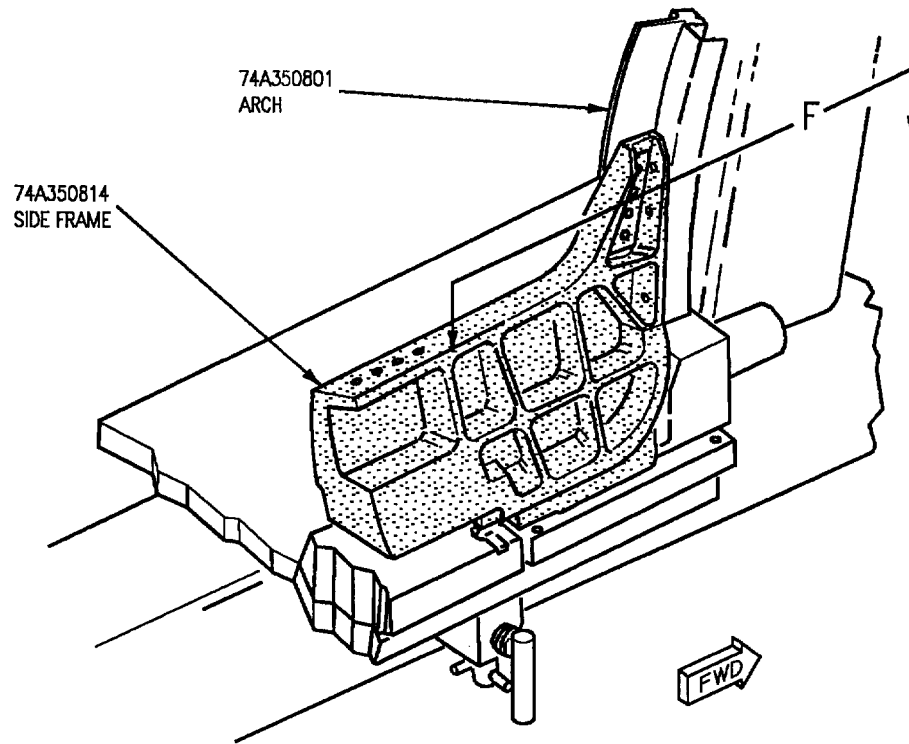
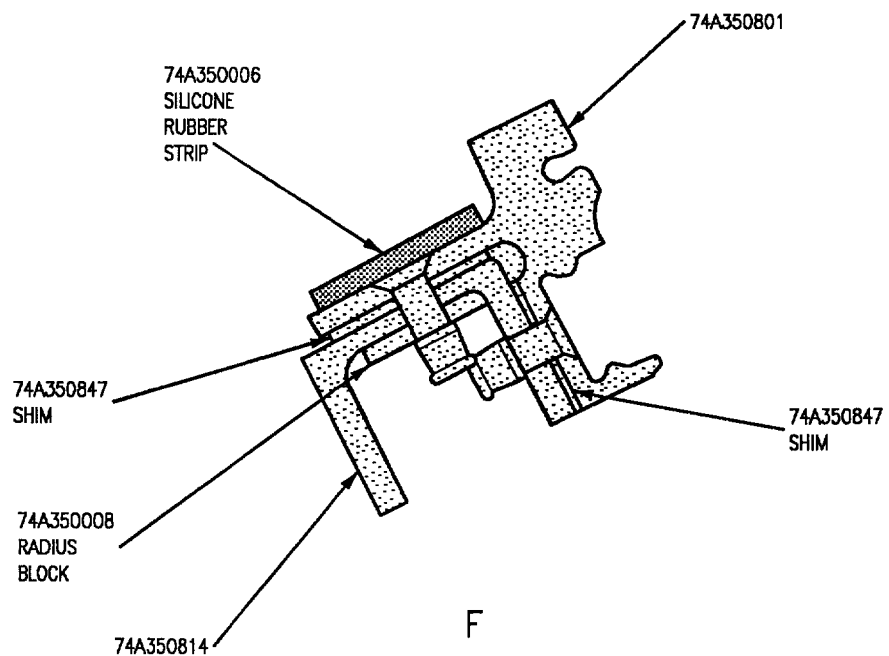


Figure 1. Inspection or Replacement - Arch (Sheet 3)

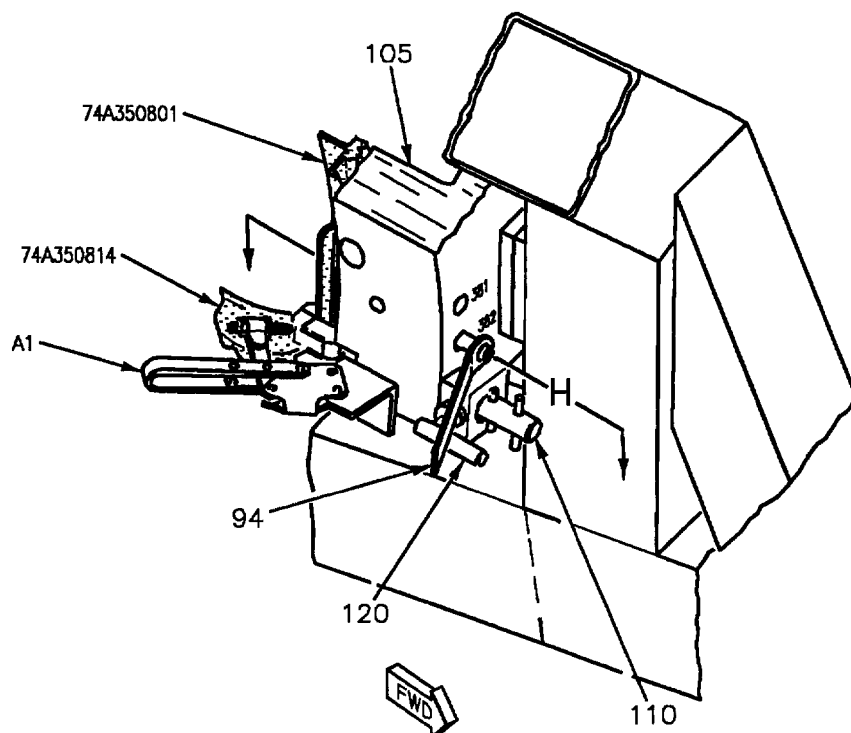


E



F

Figure 1. Inspection or Replacement - Arch (Sheet 4)



G

TYPICAL TWO PLACES

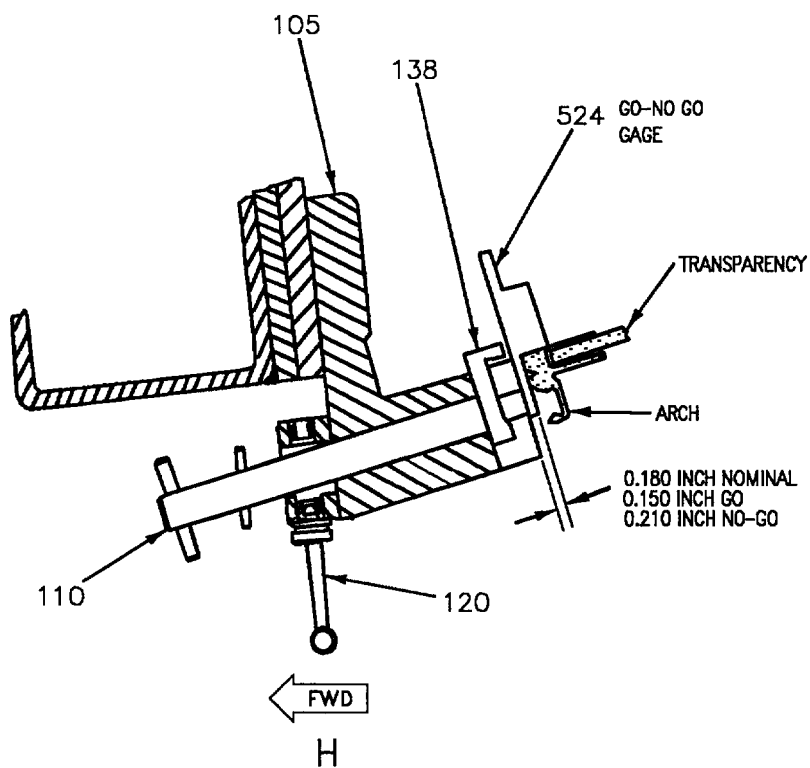


Figure 1. Inspection or Replacement - Arch (Sheet 5)

DETAIL NO.	NAME	FUNCTION
A1	Toggle clamp	Secures canopy arch to arch locator (detail 138).
K1	Traveler bushing	Guides 0.1285 inch diameter drill in nominal size hole.
P1	Traveler bushing	Guides 0.1285 inch diameter drill in first oversize hole.
R1	Traveler bushing	Guides 0.1285 inch diameter drill in second oversize hole.
94	Traveler bushing	Guides 0.1895 inch diameter drill at hole locations 379, 380, 381, and 382.
105	Arch base	Contains various details for clamping, inspecting, and locating canopy arch.
110	T-pin	Supports and moves arch locator (detail 138).
120	L-pin	Retains T-pin (detail 110) and arch locator (detail 138).
138	Arch locator	Locates canopy arch on arch base (detail 105).
524	GO, NO-GO gage	Identifies “go” or “no-go” limits when inspecting canopy arch.

Figure 1. Inspection or Replacement - Arch (Sheet 6)

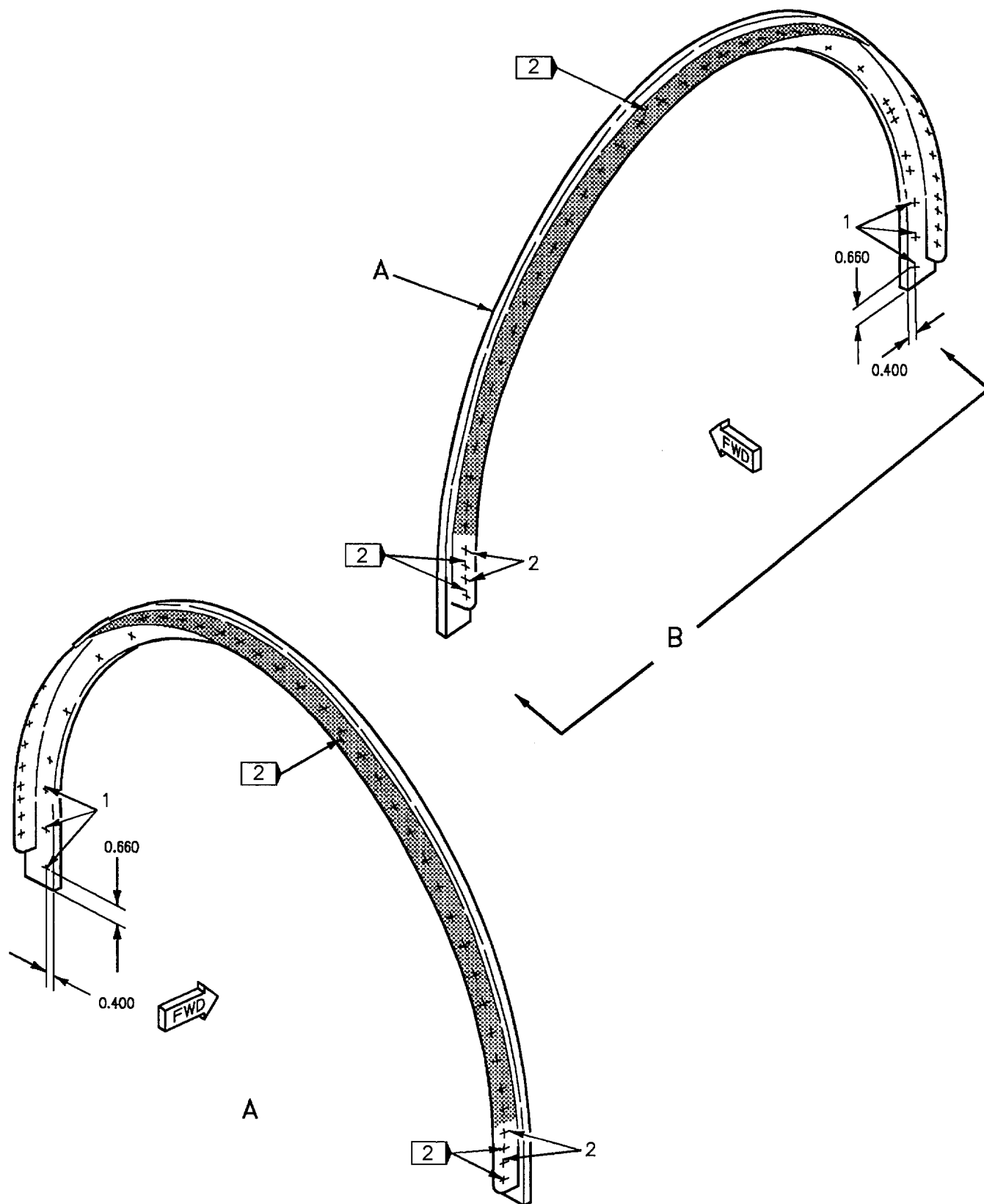
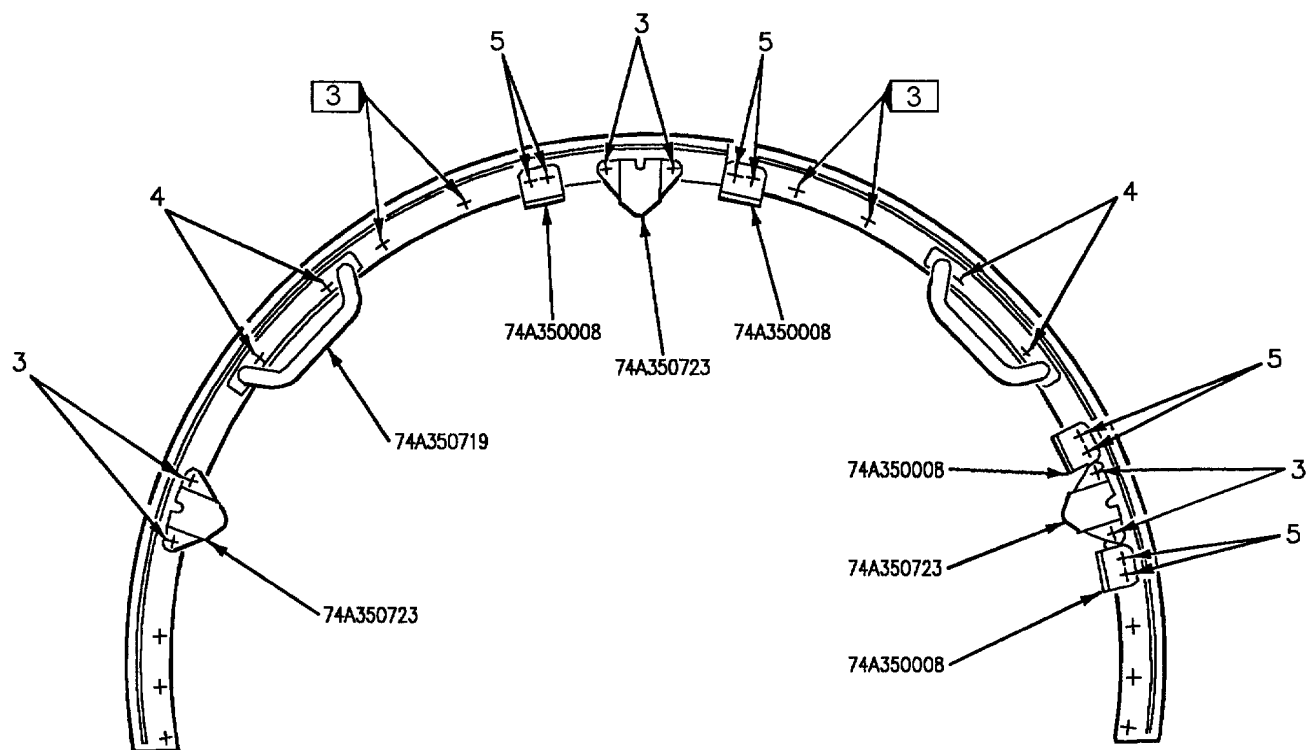


Figure 2. Arch, 74A350801, Fastener Index (Sheet 1)



VIEW LOOKING FORWARD
B

06020202

INDEX NO.	HOLE NO.	QTY	HOLE SIZE		FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1		6	0.1895 +0.0022 -0.0000		HLT311TA6-5			SW1000-6M
2		4	0.1895 +0.0022 -0.0000		HLT311TA6-6			SW1000-6M
3		6	0.169 +0.006 -0.0000		HLT311TA5-3			SW1000-5M
4		4	0.195 +0.0007 -0.0000		NAS663V3HT	AN960C10L		NAS1291C3M
5		8	0.128 +0.006 -0.0000		MS20426AD4			
LEGEND								
1	For oversize repair fasteners, see (A1-F18AC-SRM-200, WP004 07).							
2	Hole diameter is 0.195 +0.007 -0.000 at hole location 1 through 41.							
3	Hole diameter is 0.195 +0.007 -0.000.							

Figure 2. Arch, 74A350801, Fastener Index (Sheet 2)

4. LATCH NO.1, INSPECTION. See figure 3.



Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, F/A-18B Canopy	RE174350006-1

To prevent damage to transparency, make sure barrier material is installed between transparency and ethyl foam. See canopy preparation (WP006 01).

c. Load canopy into fixture (WP006 01).

NOTE

Locating position exists when roll pin (detail 521) is pointing inboard.

Materials Required

Nomenclature	Specification or Part Number
Barrier Material	MIL-B-131, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108

d. Locate canopy in X plane location by rotating seal retainer locator pins (details 321, 408, and 465) in locating position and secure by installing L-pin (detail 207), typical 32 places, detail B.

e. Install locator pin (detail 531) forward until flange on locator pin seats against fixture base (detail 80, 81), detail A.

f. Check for maximum 0.125 inch gap between locator plate (detail 351) and 74A350814 side frame, detail A.

g. If gap exceeds 0.125 inch, 74A350814 side frame must be replaced.

h. If gap is within tolerance specified in step f, remove canopy from fixture and reinstall 74A350803 pin, see figure 4.

a. Remove 74A350803 latch pin by removing pin and collar, see figure 4.

b. Install locator plate (detail 351) to fixture base (detail 80, 81) by installing two flat head screws, typical left and right side, detail A. See figure 3.

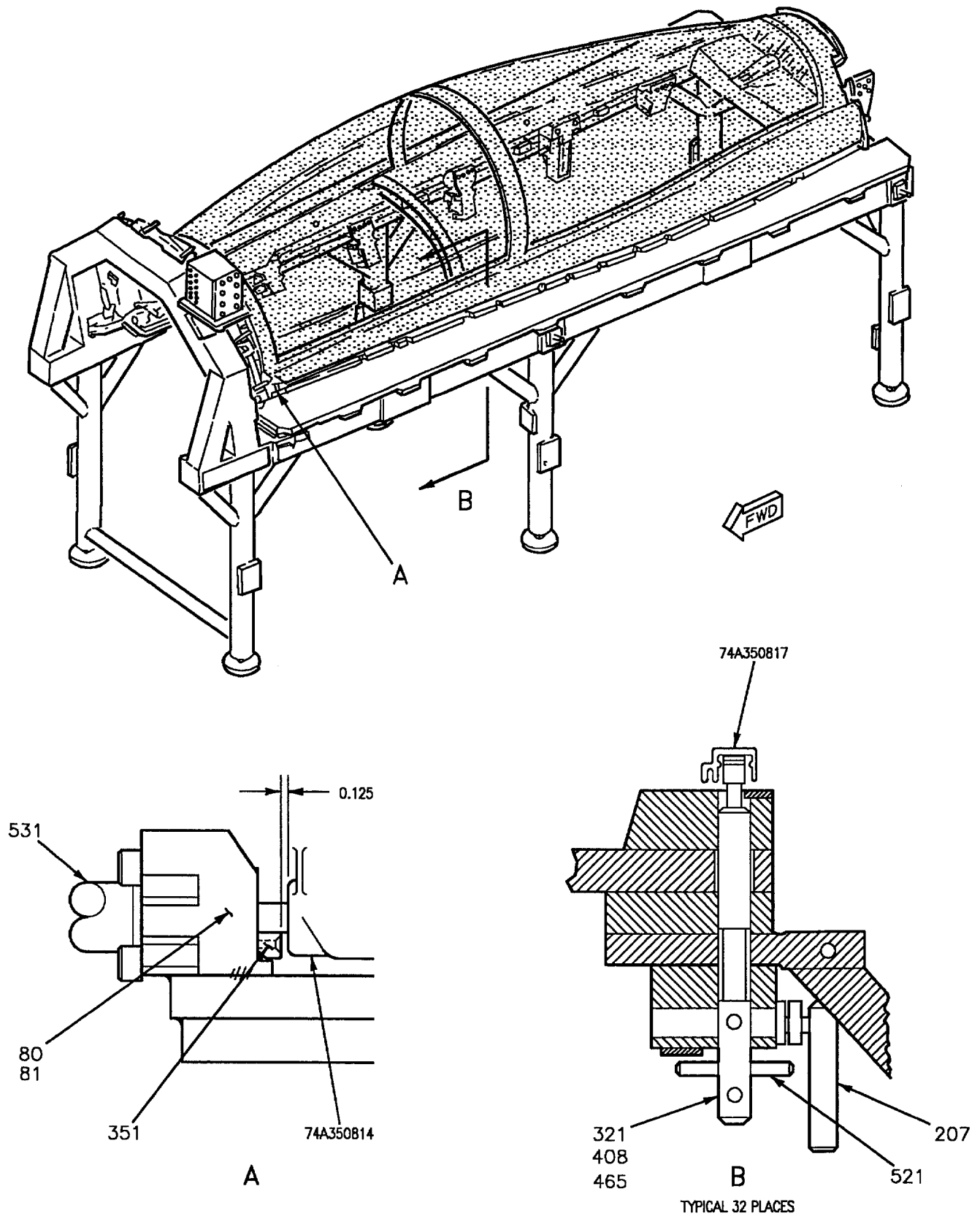


Figure 3. Inspection - Latch No. 1 (Sheet 1)

DETAIL NO.	NAME	FUNCTION
80, 81	Fixture base	Base of fixture to which locators mount.
207	L-pin	Secures locator pins (details 321, 408, and 465).
321	Locator pin	Locates seal retainer and positions canopy in X plane location.
351	Locator plate	Provides surface for measuring gap between canopy and locator plate.
408	Locator pin	Locates seal retainer and positions canopy in X plane location.
465	Locator pin	Locates seal retainer and positions canopy in X plane location.
521	Roll pin	Used as a directional indicator to determine position of locator pins (details 321, 408, and 465).
531	Locator pin	Checks hole location for 74A350803 latch pin.

Figure 3. Inspection - Latch No. 1 (Sheet 2)

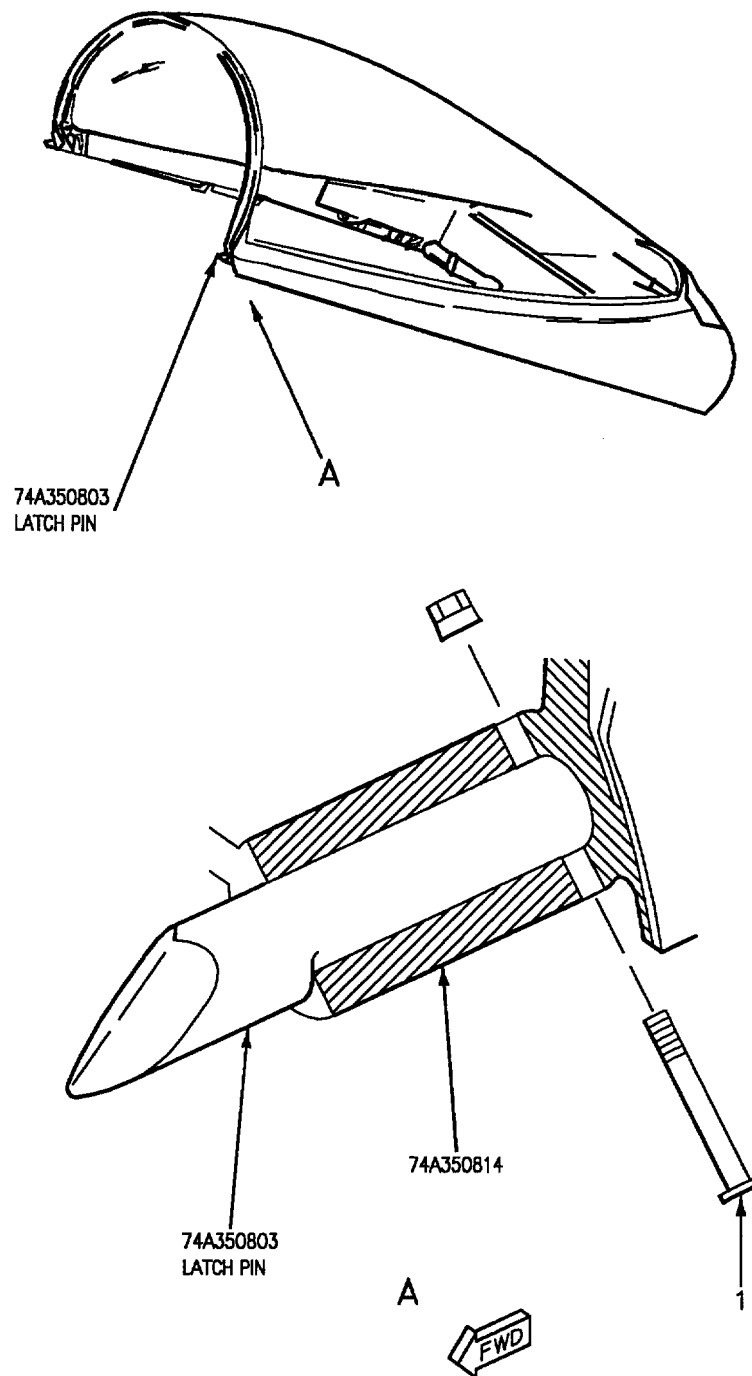


Figure 4. Latch No. 1, Fastener Index (Sheet 1)



INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO.	FASTENER	WASHER	SPACER BUSHING	RETAINER
1		2	0.191 +0.006 -0.000		HLT310TB- 6-20 			SW1000-6M
LEGEND								
 Install pin with head on lower surface.								

Figure 4. Latch No. 1, Fastener Index (Sheet 2)

5. **SIDE FAIRING, 74A350824, INSPECTION AND REPLACEMENT.** See figure 5.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, F/A-18B Canopy	RE174350006-1
Repair Kit, Canopy	RE274350006-1

Materials Required

Nomenclature	Specification or Part Number
Barrier Material	MIL-B-131, Class 1
Cheesecloth	CCC-C-440, Type 1, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108
Isopropyl Alcohol	TT-I-735
Sealing Compound	MIL-S-83430, Class A-1/2

6. **INSPECTION.**



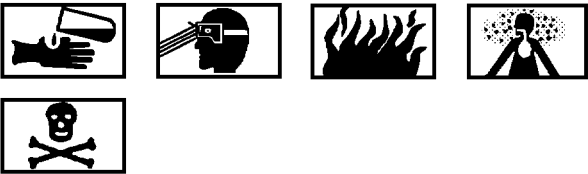
To prevent damage to transparency, be sure barrier material is installed between transparency and ethyl foam. See canopy preparation (WP006 01).

- a. Load canopy into fixture (WP006 01).
- b. Position trim boards (details 144, 145, 146, 147, 148, and 149) on fixture base (detail 192, 193) by installing L-pins (detail 127) six places and secure by installing handknobs (detail 291) nine places.
- c. Insert 0.080 inch “GO” side of gage (detail 253) between trim board (details 144, 145, 146, 147, 148, and 149) and lower edge of side fairings to check that minimum allowable gap has not been exceeded, detail A.

d. Try to insert 0.220 inch “NO-GO” side of gage (detail 253) between trim board (details 144, 145, 146, 147, 148, and 149) and lower edge of side fairings to check that maximum allowable gap has not been exceeded, detail A.

7. **REPLACEMENT.**

- a. Load canopy into fixture (WP006 01).
- b. Remove transparency (WP006 03).
- c. Remove fasteners attaching damaged side fairing(s) to mating structure. See figure 6 for fastener location.



Isopropyl Alcohol 2

d. Clean all residual sealant from mating structure using plastic scraper and cheesecloth moistened with isopropyl alcohol.

NOTE

For replacement of Y238.270 through Y266.493 side fairing, do step e. For replacement of Y283.520 through Y365.700 side fairing, do step f.

- e. Side Fairing, Y238.270 through Y266.493:
 - (1) Locate fairing in X plane location by positioning fairing against 74A350814 side frame.
 - (2) Locate fairing in Y plane location by positioning fairing against arch locator (detail 138), detail B.
 - (3) Position drill blanket (detail 87, 96) on fixture base (detail 192, 193) by inserting L-pins (detail 364) and secure by installing handknob (detail 366) two places, detail B.
 - (4) Locate fairing in Z plane location by inserting 0.125 inch shim between locators (detail 365) and fairing, typical two places, detail C.
 - (5) Secure fairing to 74A350814 side frame using C-clamps.

(6) At hole location 687 through 719 and/or 720 through 752:

(a) Install traveler bushing (detail H1) in drill blanket (detail 87, 96), see detail B.

(b) Drill 0.161 +0.005 -0.000 inch diameter hole through fairing, 74A350823 support, 74A350841 intercostals, and 74A350814 side frame using T.F.I.M. 25.0202-142 from RE274350006-1 canopy repair kit.

(c) Remove drill blanket (detail 87, 96).

(d) Countersink holes in mold line side of fairing to flushness requirements of fastener using applicable countersink cutter from 74D110325-1001 aircraft structure repair tool kit.

(e) Locate fairing on structure and install temporary fasteners.

(7) At hole location 1, 42 through 62 and/or 41, 81 through 101:

(a) Locate transparency on canopy structure (WP006 03).

NOTE

For oversize holes in transparency use traveler bushing (details P1 or R1) to drill pilot holes.

(b) Install traveler bushing (detail K1) in existing holes in transparency, detail E.

(c) Drill 0.1285 inch diameter pilot hole through fairing and 74A350814 side frame using T.F.I.M. 250215-004 from RE274350006-1 canopy repair kit with hand drill motor.

NOTE

Use applicable drill from 74D110325-1001 aircraft structure repair tool kit for holes requiring oversize drilling to match existing holes in transparency.

(d) Remove transparency and enlarge pilot holes to 0.195 +0.007 -0.000 inch diameter using T.F.I.M. 25.0202-170 from 74D110325-1001 aircraft structure repair tool kit with hand drill motor.

(8) Position trim board (detail 148, 149) on fixture base (detail 192, 193) by installing L-pins (detail 127) two places and secure by installing handknob (detail 291) three places.

(9) Scribe trim line on lower edge of fairing:

(a) Position scribe (detail 532) on trim board (detail 148, 149), detail F.

(b) Scribe trim line by applying enough pressure to make sure scribe remains flat on trim board.

(10) Remove trim board (detail 148, 149).

(11) Remove fairing.

(12) Trim fairing to scribed line.

(13) Apply finish system (A1-F18AC-SRM-500, WP021 00).



Sealing Compound

7

(14) Lay surface seal between fairing and mating structure (A1-F18AC-SRM-200, WP011 00).

(15) Wet install fasteners securing fairing to substructure.

(16) Install transparency (WP006 03).

f. Side Fairing, Y283.520 through Y365.700:

(1) Locate fairings in X plane location by positioning fairing against 74A350814 side frame, 74A350841 intercostals, and 74A350823 supports.

(2) Position drill blanket (detail 51, 52) on fixture base (detail 192, 193) by inserting L-pins (detail 558) three places and secure by installing handknob (detail 251) five places, detail B.

(3) Locate fairings in Y plane location by pinning fairing into slotted bushing (detail 51K, 52K), detail B.

(4) Locate fairings in Z plane location by inserting 0.125 inch shim between locator (detail 367) and fairing, typical eight places, detail D.

(5) Secure fairings to 74A350814 side frame using C-clamps.

(6) At hole location 417 through 551 and/or 552 through 686:

(a) Install traveler bushing (detail D1) in drill blanket (detail 51, 52), detail B.

(b) Drill 0.161 +0.005 -0.000 inch diameter hole through fairing, 74A350823 supports, and 74A350841 intercostals using T.F.I.M. 25.0202-142 from RE274350006-1 canopy repair kit.

(c) Remove drill blanket (detail 51, 52).

(d) Countersink holes in mold line side of fairing to flushness requirements of fastener using applicable countersink cutter from 74D110325-1001 aircraft structure repair tool kit.

(e) Locate fairing on structure and install temporary fasteners.

(7) At hole location 76 through 80, 120, 233 through 292 and/or 119, 176 through 320:

(a) Locate transparency on canopy structure (WP006 03).

NOTE

For oversize holes in transparency, use traveler bushing (detail P1 or R1) to drill pilot holes.

(b) Install traveler bushing (detail K1) in existing holes in transparency, detail E.

(c) Drill 0.1285 inch diameter pilot hole through fairing and 74A350814 side frame using T.F.I.M. 25.0215-004 from RE274350006-1 canopy repair kit with hand drill motor.

NOTE

Use applicable drill from 74D110325-1001 aircraft structure repair tool kit for holes requiring oversize drilling to match existing holes in transparency.

(d) Remove transparency and enlarge pilot holes to 0.195 +0.007 -0.000 inch diameter using T.F.I.M. 25.0202-170 from 74D110325-1001 aircraft structure repair tool kit with hand drill motor.

(8) Position trim board (detail 148, 149) on fixture base (detail 192, 193) by installing L-pins (detail 127) two places and secure by installing handknobs (detail 291) six places.

(9) Scribe trim line on lower edge of fairing:

(a) Position scribe (detail 532) on trim boards (details 144, 145, 146, and 147), detail F.

(b) Scribe trim line by applying enough pressure to make sure scribe remains flat on trim boards.

(10) Remove trim boards (details 144, 145, 146, and 147).

(11) Remove fairings.

(12) Trim fairings to scribed line.

(13) Apply finish system (A1-F18AC-SRM-500, WP021 00).



Sealing Compound

7

(14) Lay surface seal between fairings and mating structure (A1-F18AC-SRM-200, WP011 00).

(15) Wet install fasteners securing fairings to substructure.

(16) Install transparency (WP006 03).

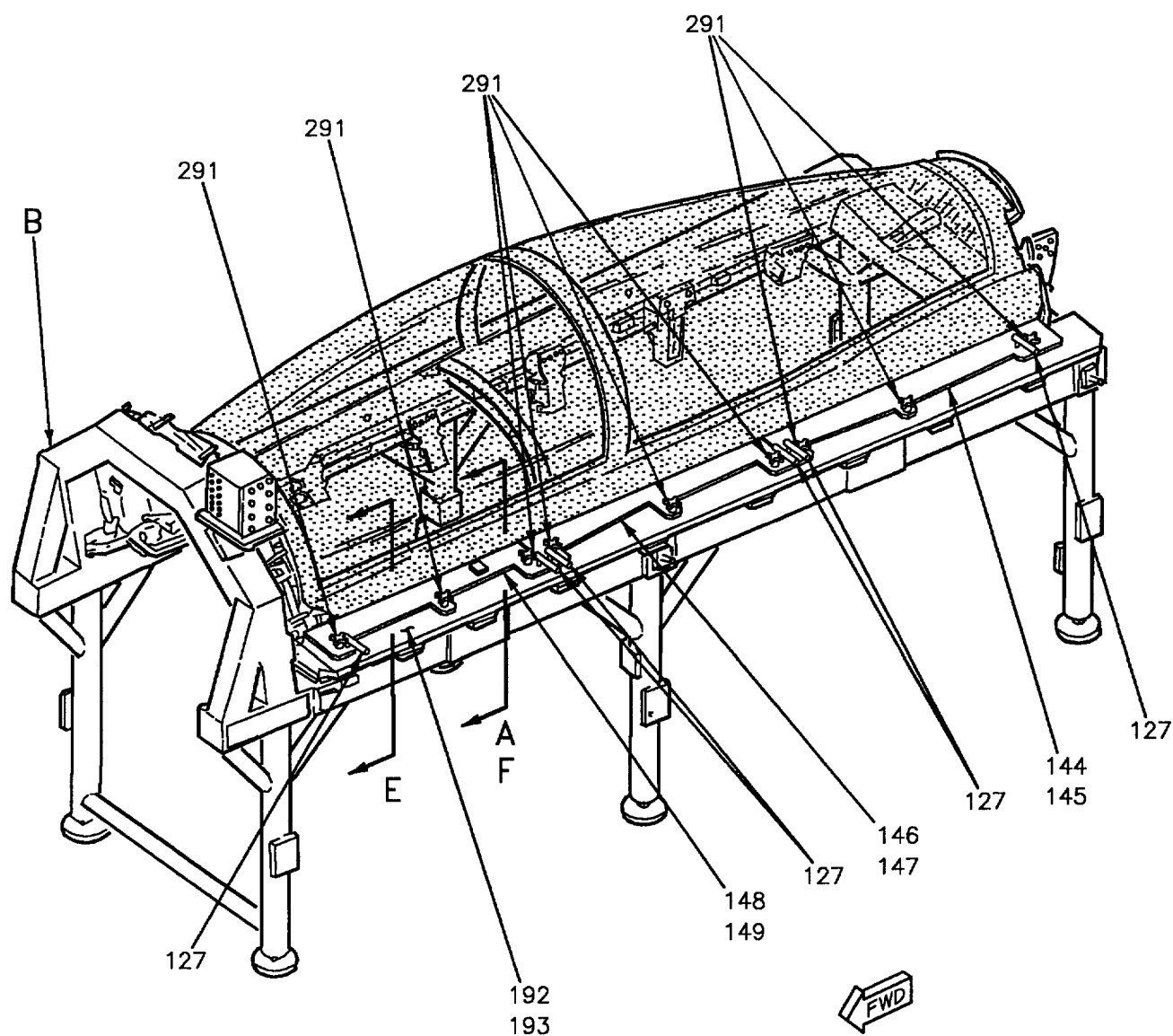
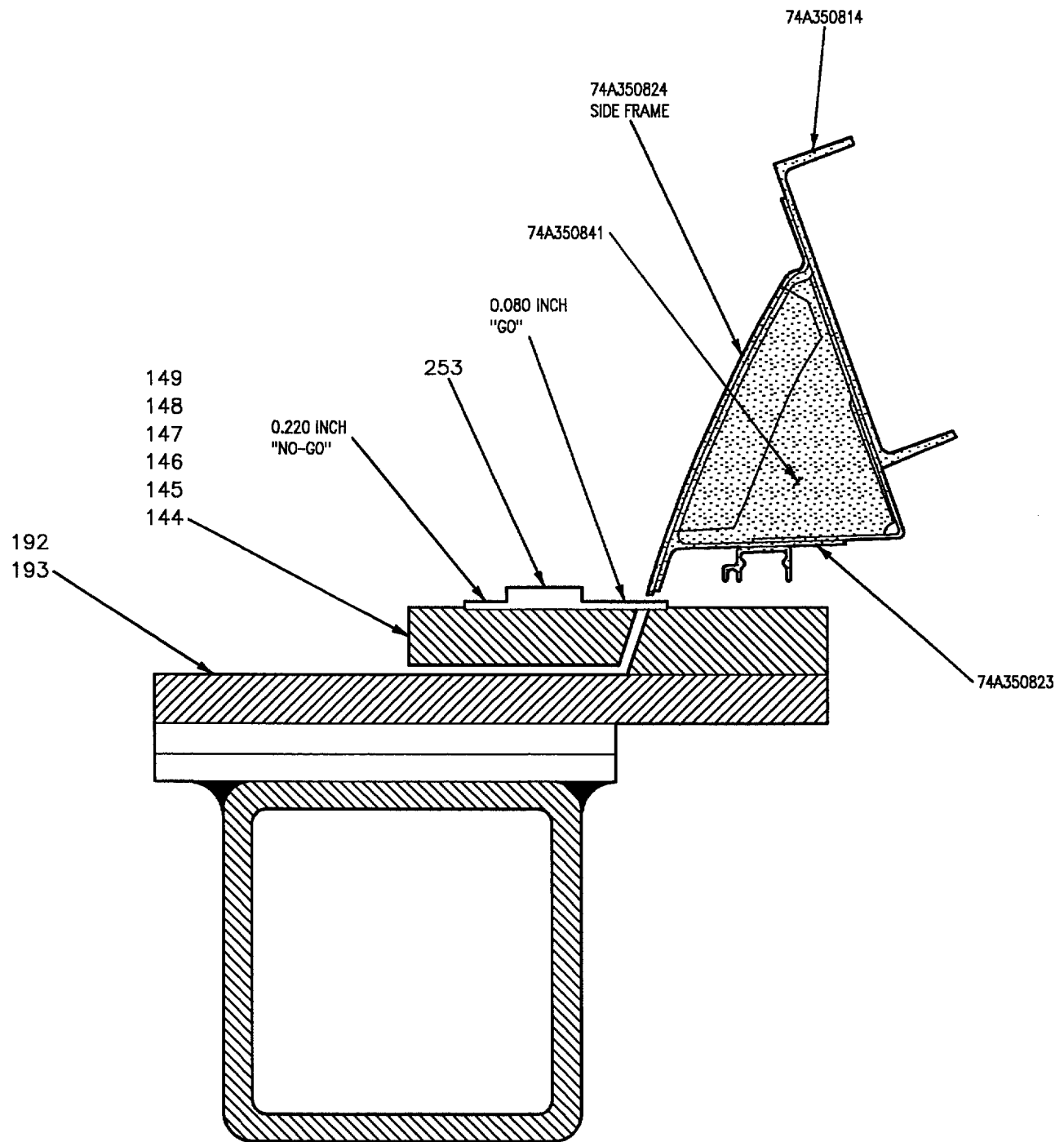


Figure 5. Inspection or Replacement - Side Fairing (Sheet 1)



A

VIEW LOOKING FORWARD

Figure 5. Inspection or Replacement - Side Fairing (Sheet 2)

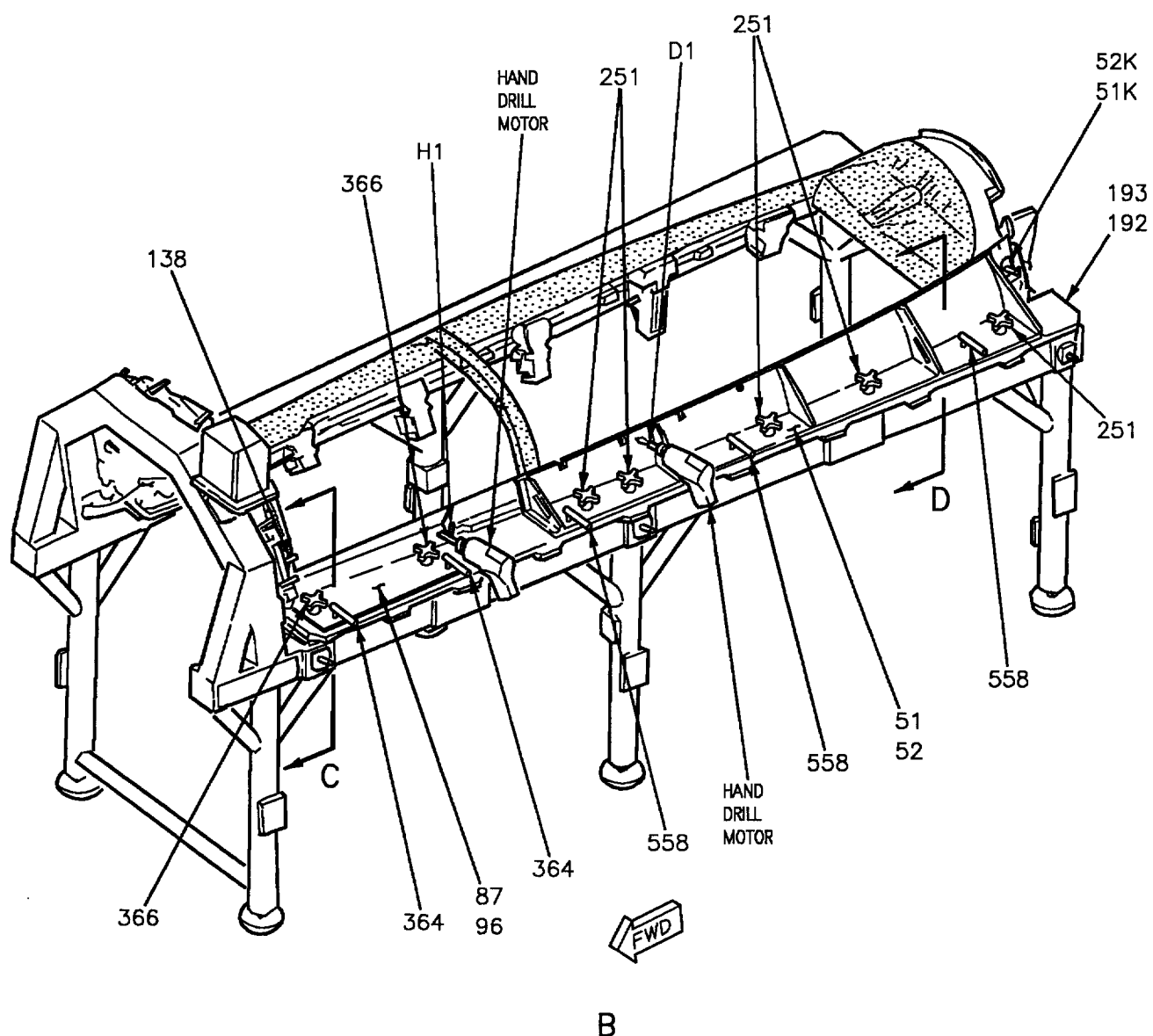


Figure 5. Inspection or Replacement - Side Fairing (Sheet 3)

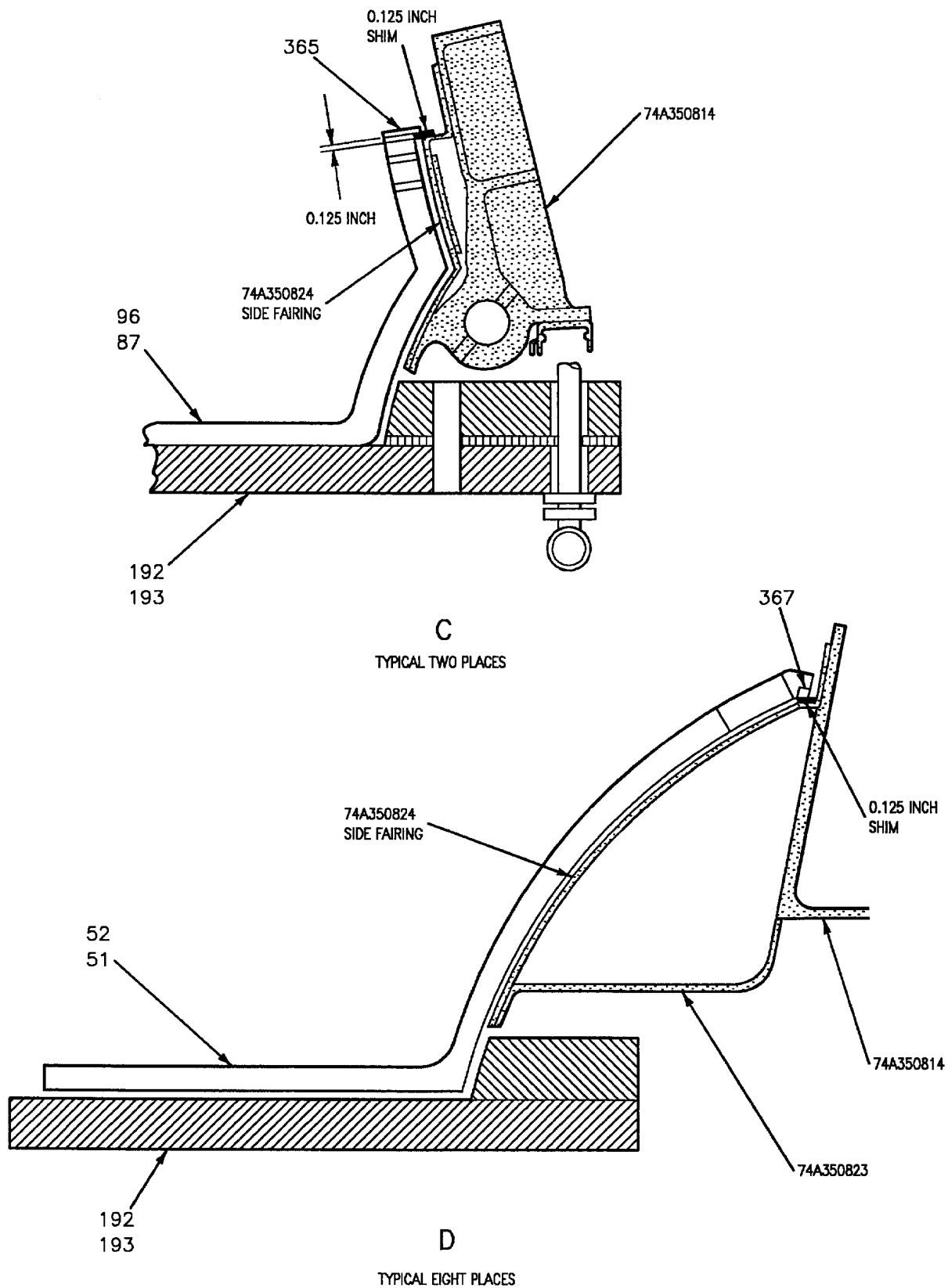
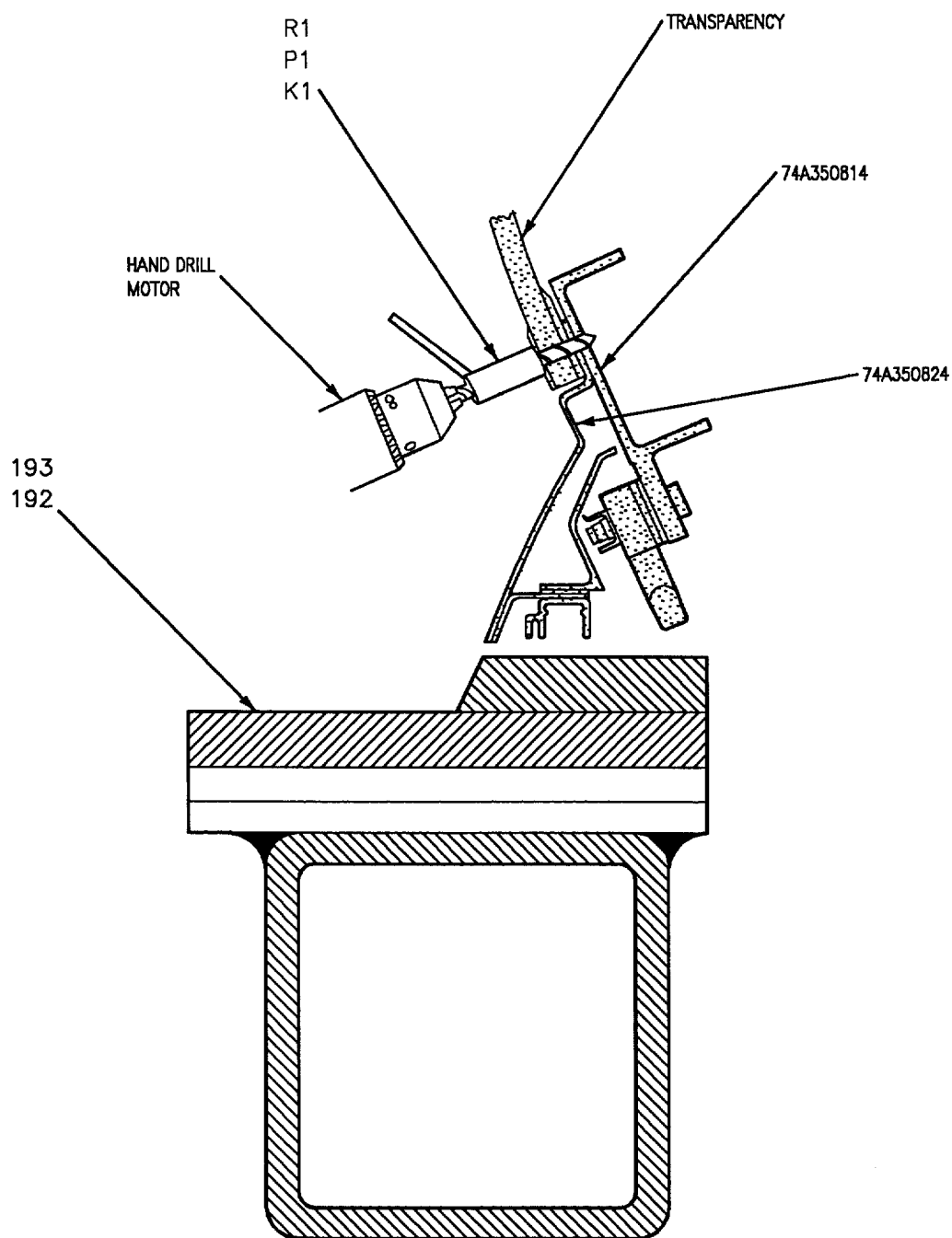


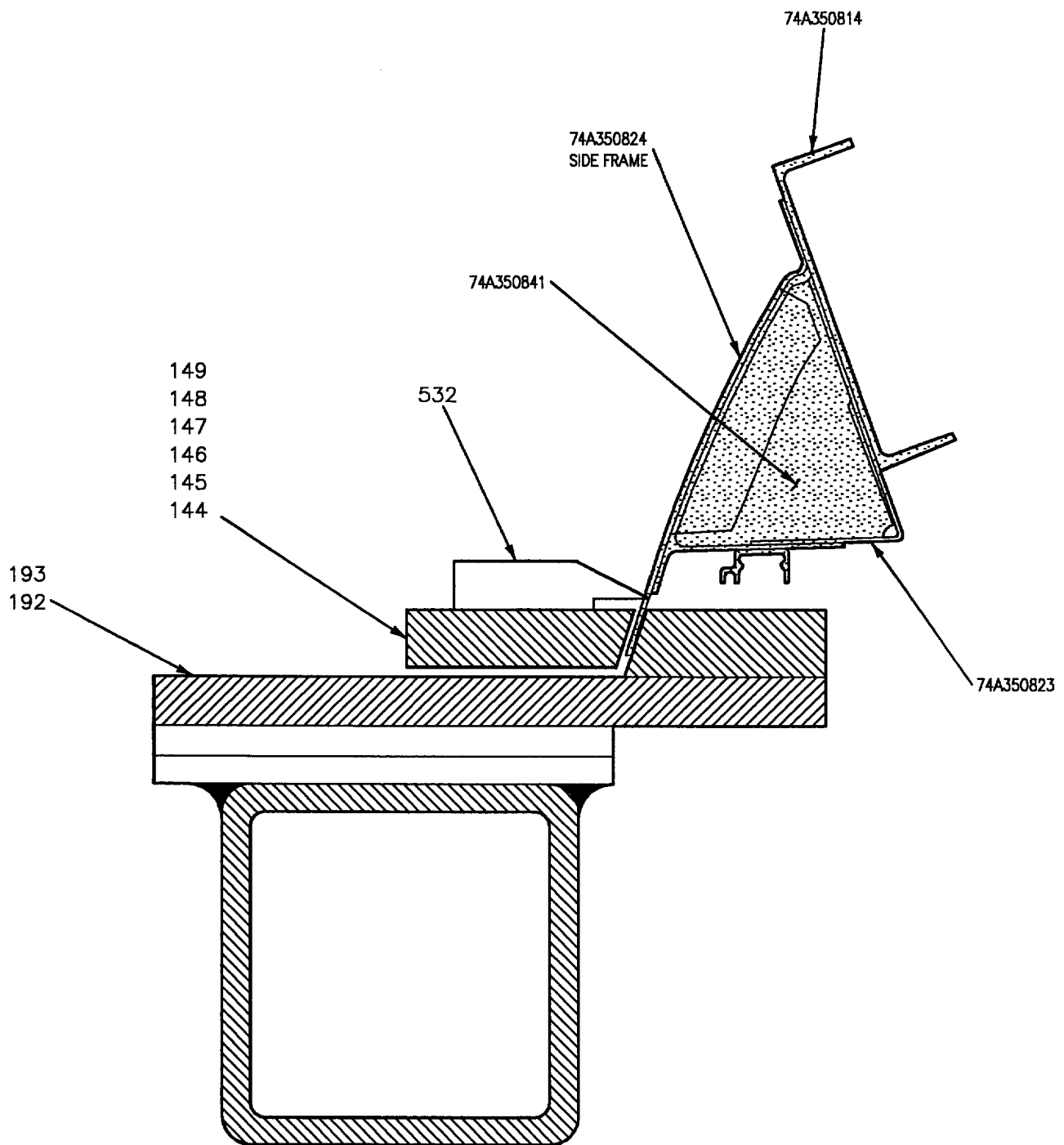
Figure 5. Inspection or Replacement - Side Fairing (Sheet 4)



E

VIEW LOOKING FORWARD

Figure 5. Inspection or Replacement - Side Fairing (Sheet 5)



F

VIEW LOOKING FORWARD

Figure 5. Inspection or Replacement - Side Fairing (Sheet 6)

DETAIL NO.	NAME	FUNCTION
D1	Traveler bushing	Guides 0.161 inch diameter drill.
H1	Traveler bushing	Guides 0.161 inch diameter drill.
K1	Traveler bushing	Guides 0.1285 inch diameter drill in nominal size hole.
P1	Traveler bushing	Guides 0.1285 inch diameter drill in first oversize hole.
R1	Traveler bushing	Guides 0.1285 inch diameter drill in second oversize hole.
51, 52	Drill blanket	Locates hole pattern on 74A350824 side fairing.
51K, 52K	Slotted bushing	Used to pin 74A350824 side fairing in Y plane location.
87, 96	Drill blanket	Locates hole pattern on 74A350824 side fairing.
127	L-pin	Locates trim boards (details 144, 145, 146, 147, 148, and 149) on fixture base (detail 192, 193).
138	Arch locator	Used to locate side fairings in Y plane location.
144, 145, 146, 147, 148, and 149	Trim boards	Used to check or scribe trim line on side fairings.
192, 193	Fixture base	Base to which various details are mounted.
251	Handknob	Secures drill blanket (detail 51, 52) to fixture base (detail 192, 193).
253	“GO”, “NO-GO” gage	Used to determine minimum and maximum allowable gap between side fairings and trim boards (details 144, 145, 146, 147, 148, and 149).
291	Handknob	Secures trim boards (details 144, 145, 146, 147, 148, and 149) to fixture base (detail 192, 193).
364	L-pin	Used to locate drill blanket (detail 87, 96) to fixture base (detail 192, 193).
365	Locator	Used to locate side fairing in Z plane location.
366	Handknob	Used to secure drill blanket (detail 87, 96) to fixture base (detail 192, 193).
367	Locator	Used to locate side fairings in Z plane location.
532	Scribe	Used to scribe trim line on side fairings.
558	L-pin	Used to locate drill blanket (detail 51, 52) to fixture base (detail 192, 193).

Figure 5. Inspection or Replacement - Side Fairing (Sheet 7)

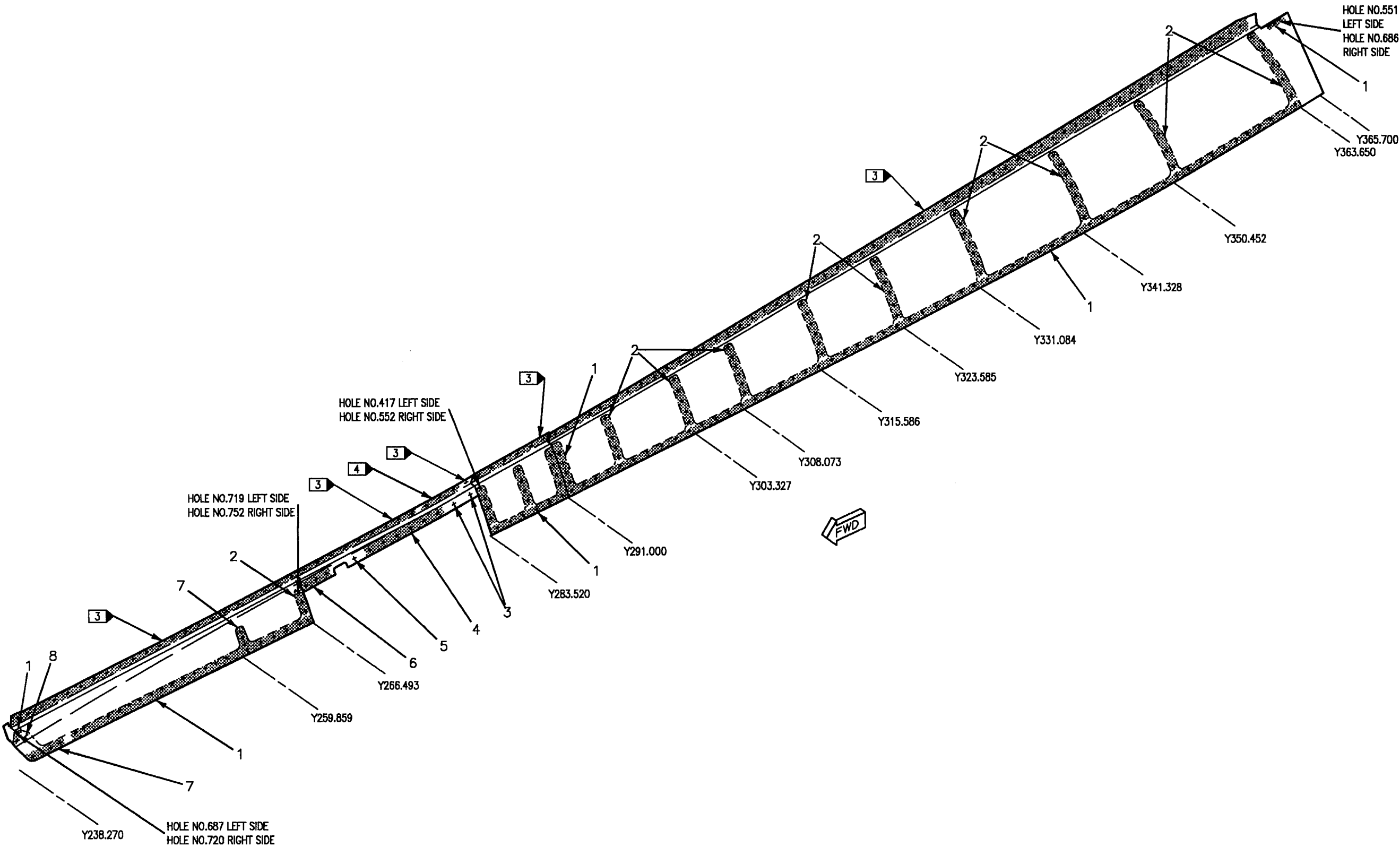


Figure 6. Side Fairing, 74A350824, Fastener Index (Sheet 1)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO.	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1		97	0.161 +0.005 -0.000	T.F.I.M. 25.0202-142 NOMINAL 2	MS20426AD5			
2		63	0.160 +0.004 -0.000	T.F.I.M. 25.0202-142 NOMINAL 2	NAS1399C5A2			
3		2	0.195 +0.007 -0.000		HT4024L3-2			F50340-3-1 5
4		6	0.195 +0.007 -0.000		HT4024L3-2			3M463-N11A6F1 5
5		1	0.195 +0.007 -0.000		HT4024L3-2			F50339-3-1 5
6		3	0.195 +0.007 -0.000		HT4024L3-2			3M463-N8A3M1 5
7		7	0.160 +0.004 -0.000	T.F.I.M. 25.0202-142 NOMINAL 2	NAS1399C5A3			
8		1	0.165 +0.003 -0.000	T.F.I.M. 25.0202-142 NOMINAL 2	NAS1670-08L-11			
<p style="text-align: center;">LEGEND</p> <p>1 For oversize repair fasteners, (A1F18AC-SRM-200, WP004 07).</p> <p>2 Part of RE274350006-1 canopy repair kit.</p> <p>3 Hole diameter is 0.195 +0.007 -0.000. See WP006 03, figure 2, for fastener and retainer identification.</p> <p>4 Hole diameter is 0.255 +0.007 -0.000. See WP006 03, figure 2, for fastener and retainer identification.</p> <p>5 Attach retainer using CSR904B-3-3 rivets.</p>								

Figure 6. Side Fairing, 74A350824, Fastener Index (Sheet 2)

8. INTERCOSTAL, 74A350841, RE-PLACEMENT. See figure 7.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, F/A-18B Canopy	RE174350006-1
Repair Kit, Canopy	RE274350006-1

Materials Required

Nomenclature	Specification or Part Number
Barrier Material	MIL-B-131, Class 1
Cheesecloth	CCC-C-440, Type 1, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108
Isopropyl Alcohol	TT-I-735
Sealing Compound	MIL-S-83430, Class A-1/2



To prevent damage to transparency, be sure barrier material is installed between transparency and ethyl foam. See canopy preparation (WP006 01).

- Load canopy into fixture (WP006 01).
- Remove transparency (WP006 03).
- Remove 74A350824 side fairing. See figure 6 for fastener location.
- Remove 74A350826 channel assembly, paragraph 9, this WP.
- Remove fasteners attaching damaged intercostal(s) to mating structure. See figure 8 for fastener location.
- Remove damaged intercostal(s).



Isopropyl Alcohol

2

g. Clean all residual sealant from mating structure using plastic scraper and cheesecloth moistened with isopropyl alcohol.

h. Slide lower fairing support locators (detail 332, 334) upward and secure in position with L-pin (detail 176). See detail B.

NOTE

If replacing individual intercostal, only the bank of locator blocks applicable to that area need be installed.

i. Locate aft bank assembly for intercostals located at Y323.585 thru Y363.650:

(1) Position aft bank assembly (detail 502) on fixture base (detail 192,193) using L-pin (detail 550) two places and secure by installing handknob (detail 339) three places, detail A.

NOTE

Locator block (details 487, 489, 491, 496, and 497) are used on left side. Locator block (details 450, 488, 490, 496, and 497) are used on right side.

(2) Slide locator block (details 450, 487, 488, 489, 490, 491, 496, and 497) inboard and secure in position using L-pin (detail 176). See detail A.

(3) Locate intercostal(s) in X plane location by positioning inboard flange of intercostal net with outboard surface of 74A350814 side frame and 74A350823 lower fairing support. See detail C.

(4) Locate intercostal(s) in Y plane location by positioning aft surface of intercostal net with forward surface of locator block (details 450, 487, 488, 489, 490, 491, 496, and 497). See detail A.

(5) Locate intercostal(s) in Z plane location by positioning bottom flange of intercostal net with 74A350823 lower fairing support. See detail C.

NOTE

Locator block (details 372, 375, 537, 539, and 541) are used on left side. Locator block (details 347, 376, 538, 540, and 542) are used on right side.

(6) Insert 0.125 inch shim between outboard flange of intercostal and inboard flange of locator block (details 347, 372, 375, 376, 537, 538, 539, 540, 541, and 542) and secure in place using C-clamps. See detail A.

NOTE

Do steps l, m, n, and o when intercostal(s) are located in position.

j. Locate center bank assembly for intercostals located at Y287.073 thru Y315.586:

(1) Position center bank assembly (detail 504) on fixture base (detail 192, 193) using L-pin (detail 550) two places and secure by installing handknob (detail 339) three places. See detail D.

NOTE

Locator block (details 499, 501, 503, 505, and 506) are used on left side. Locator block (details 500, 501, 503, 505, and 506) are used on right side.

(2) Slide locator block (details 499, 500, 501, 503, 505, and 506) inboard and secure in position using L-pin (detail 176). See detail D.

(3) Locate intercostal(s) in X plane location by positioning inboard flange of intercostal net with outboard surface of 74A350814 side frame and 74A350823 lower fairing support. See detail F.

(4) Locate intercostal(s) in Y plane location by positioning aft surface of intercostal net with forward surface of locator block (details 499, 500, 501, 503, 505, and 506). See detail D.

(5) Locate intercostal(s) in Z plane location by positioning bottom flange of intercostal net with 74A350823 lower fairing support. See detail F.

NOTE

Locator block (details 389, 401, 403, 543, and 545) are used on left side. Locator block (details 388, 402, 404, 544, and 546) are used on right side.

(6) Insert 0.125 inch shim between outboard flange of intercostal and inboard flange of locator block (details 388, 389, 401, 402, 403, 404, 543, 544, 545, and 546) and secure in place using C-clamps. See detail D.

NOTE

Do steps l, m, n, and o when intercostal(s) are located in position.

k. Locate forward bank assembly for intercostals located at Y259.900 thru Y283.520:

(1) Position forward bank assembly (detail 380, 381) on fixture base (detail 192, 193) using L-pin (detail 550) two places and secure by installing handknob (detail 339) three places. See detail E.

NOTE

Locator block (detail 399) is used on left and right side.

(2) Slide locator block (detail 399) inboard and secure in position using L-pin (detail 176). See detail E.

(3) Locate intercostal(s) in X plane location by positioning inboard flange of intercostal net with outboard surface of 74A350814 side frame.

(4) Locate intercostal(s) in Y plane location per steps below:

(a) Locate Y283.520 intercostal by positioning aft surface of intercostal net with forward surface of locator block (detail 399).

(b) Locate Y282.960 intercostal by positioning aft surface of intercostal net with forward surface of 74A350823 lower fairing support flange.

(c) Locate Y266.493 intercostal by positioning forward surface of intercostal net with aft surface of 74A350818 latch housing.

(d) Locate Y259.900 intercostal by positioning forward surface of intercostal net with aft flange on 74A350814 side frame.

(5) Locate Y283.520 and Y282.960 intercostal in Z plane location by positioning bottom flange of intercostal net with 74A350823 lower fairing support.

(6) Locate Y266.493 and Y259.900 intercostal in Z plane location by laying edge of intercostal net with 74A350823 lower fairing support.

NOTE

Locator block (details 386, 395, and 441) are used on left side. Locator block (details 387, 396, and 442) are used on right side.

(7) Insert 0.125 inch shim between outboard flange of intercostal and inboard flange of locator block (details 386, 387, 395, 396, 441, and 442) and secure in place using C-clamps. See detail E.

1. Install intercostal(s) per steps below:



Use care when back drilling not to elongate holes in mating structure.

(1) Back drill holes in intercostal(s) using existing holes in mating structure as guide. See figure 8 for fastener location and hole diameter.

(2) Install 74A350824 side fairing with enough temporary fasteners to hold in correct position.

(3) Back drill holes in intercostal(s) using existing holes in side fairing as guide. See figure 6 for fastener location and hole diameter.

(4) Remove 74A350824 side fairing.

(5) Install plate nuts on intercostals located at Y266.493 and Y283.520. See figure 8 for plate nut identification and fastener information.

(6) Apply finish system as required to new intercostal(s) and any other areas requiring finish system touchup (A1-F18AC-SRM-500, WP021 00).



Sealing Compound

7

(7) Fay surface seal interfacing surfaces on intercostal(s) and mating structure. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

(8) Wet install fasteners. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 8.

(9) Remove C-clamps, shims, and locator bank assembly (details 380, 381, 502, and 504) from fixture base (detail 192, 193).

m. Install 74A350826 channel assembly, paragraph 9, this WP.

n. Install 74A350824 side fairing:



Sealing Compound

7

(1) Fay surface seal interfacing surfaces on fairing and mating structure. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

(2) Wet install fasteners. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 6.

o. Reinstall transparency (WP006 03).

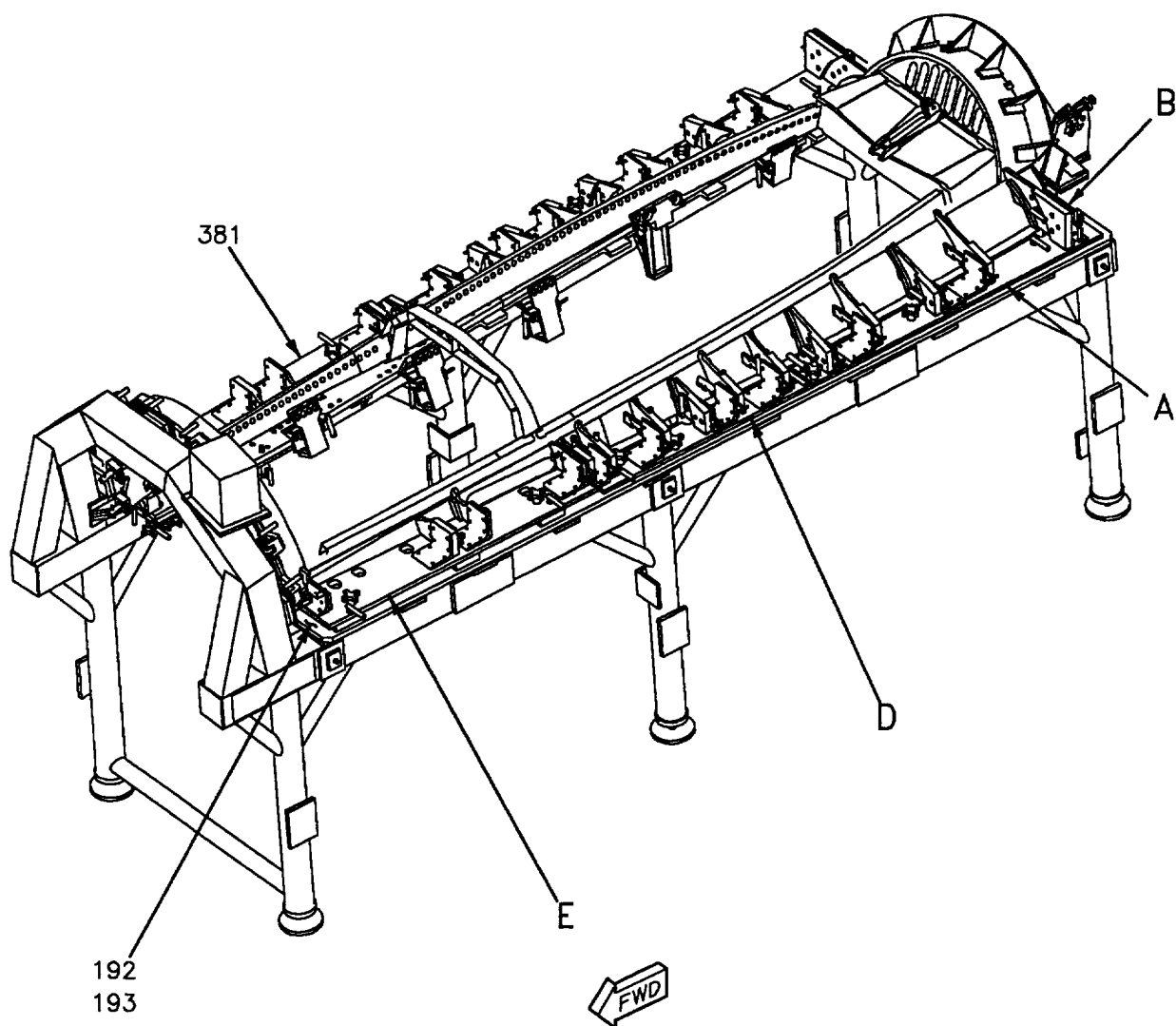


Figure 7. Replacement - Intercostal (Sheet 1)

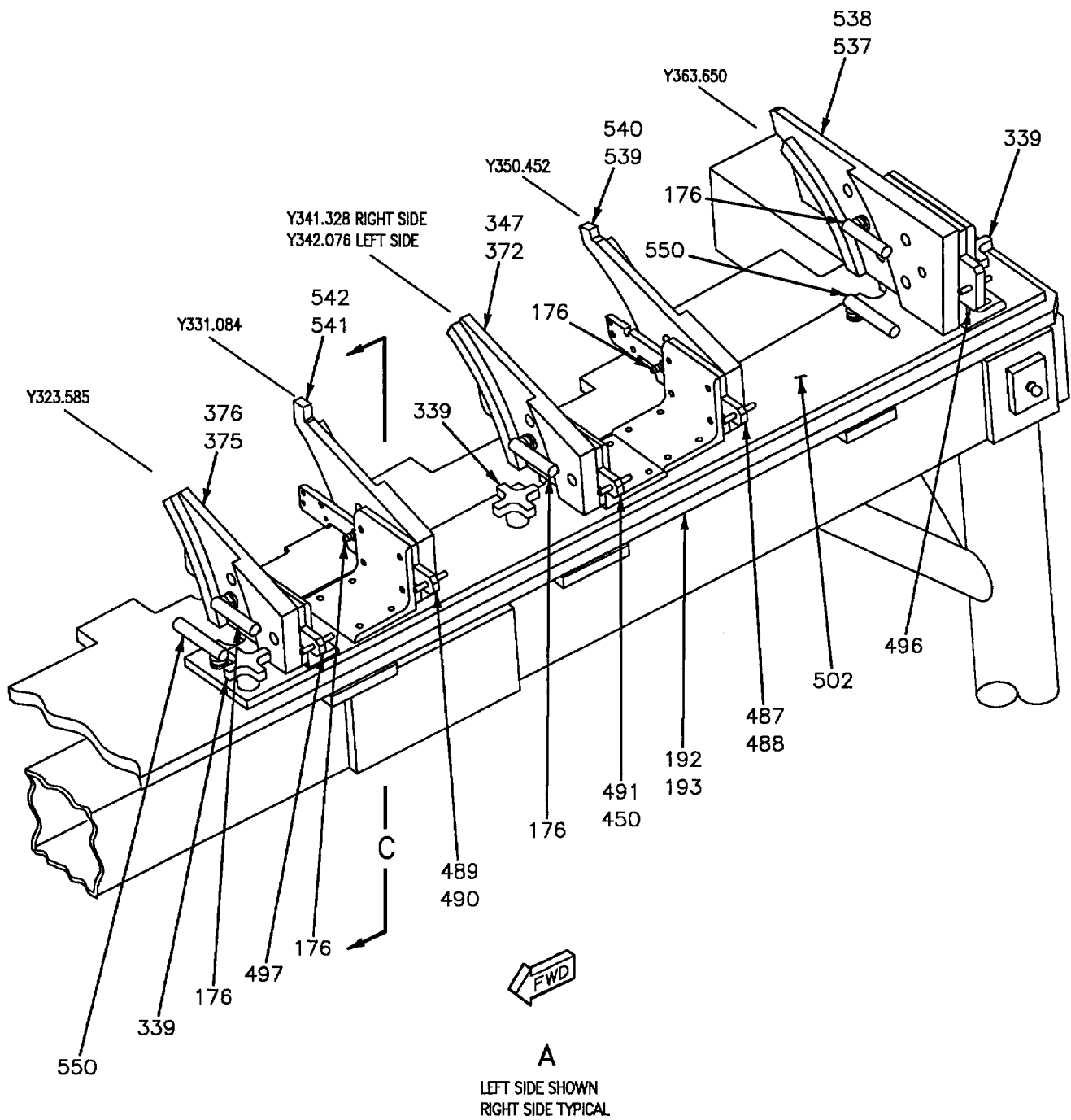


Figure 7. Replacement - Intercostal (Sheet 2)

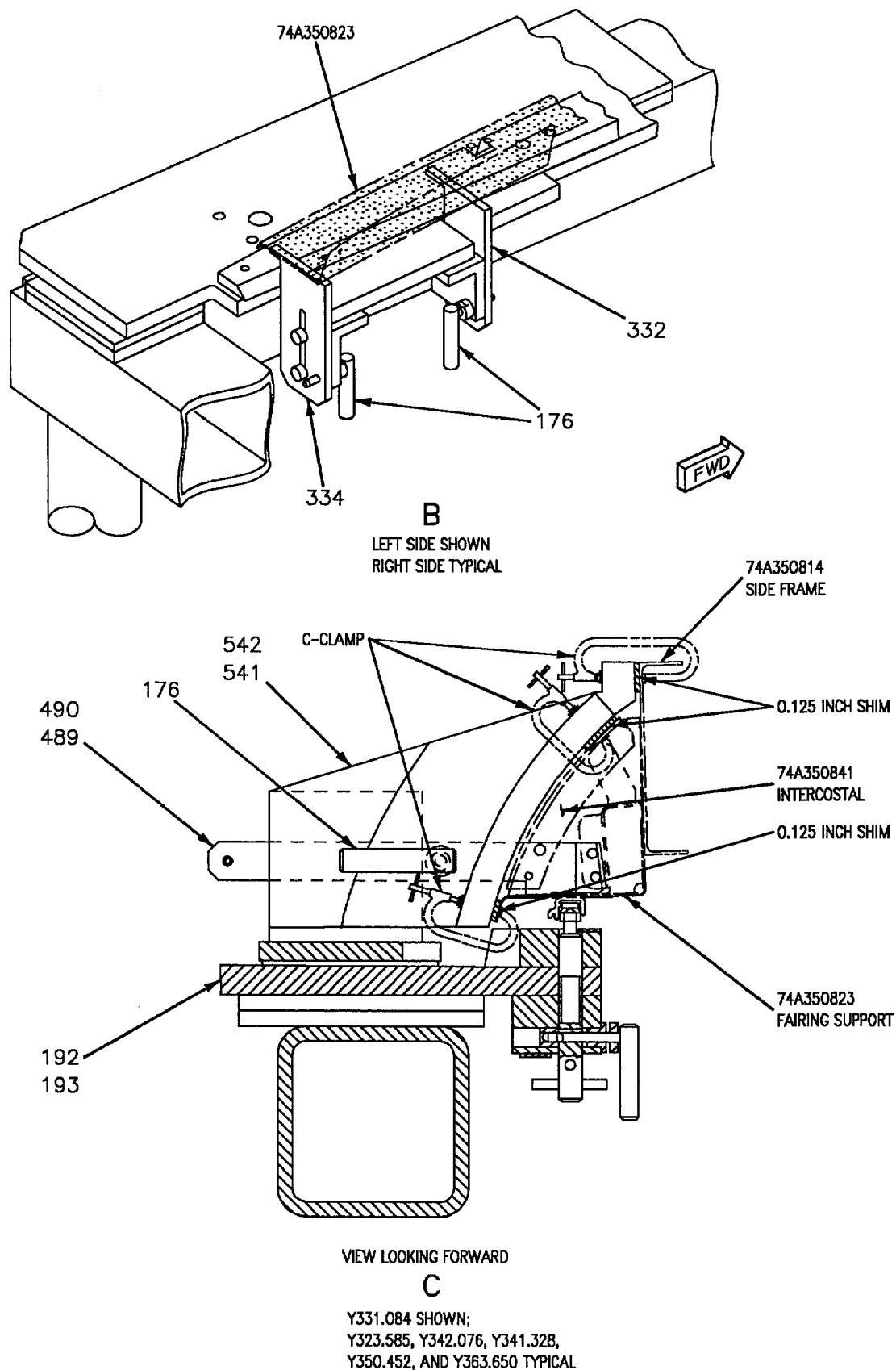


Figure 7. Replacement - Intercostal (Sheet 3)

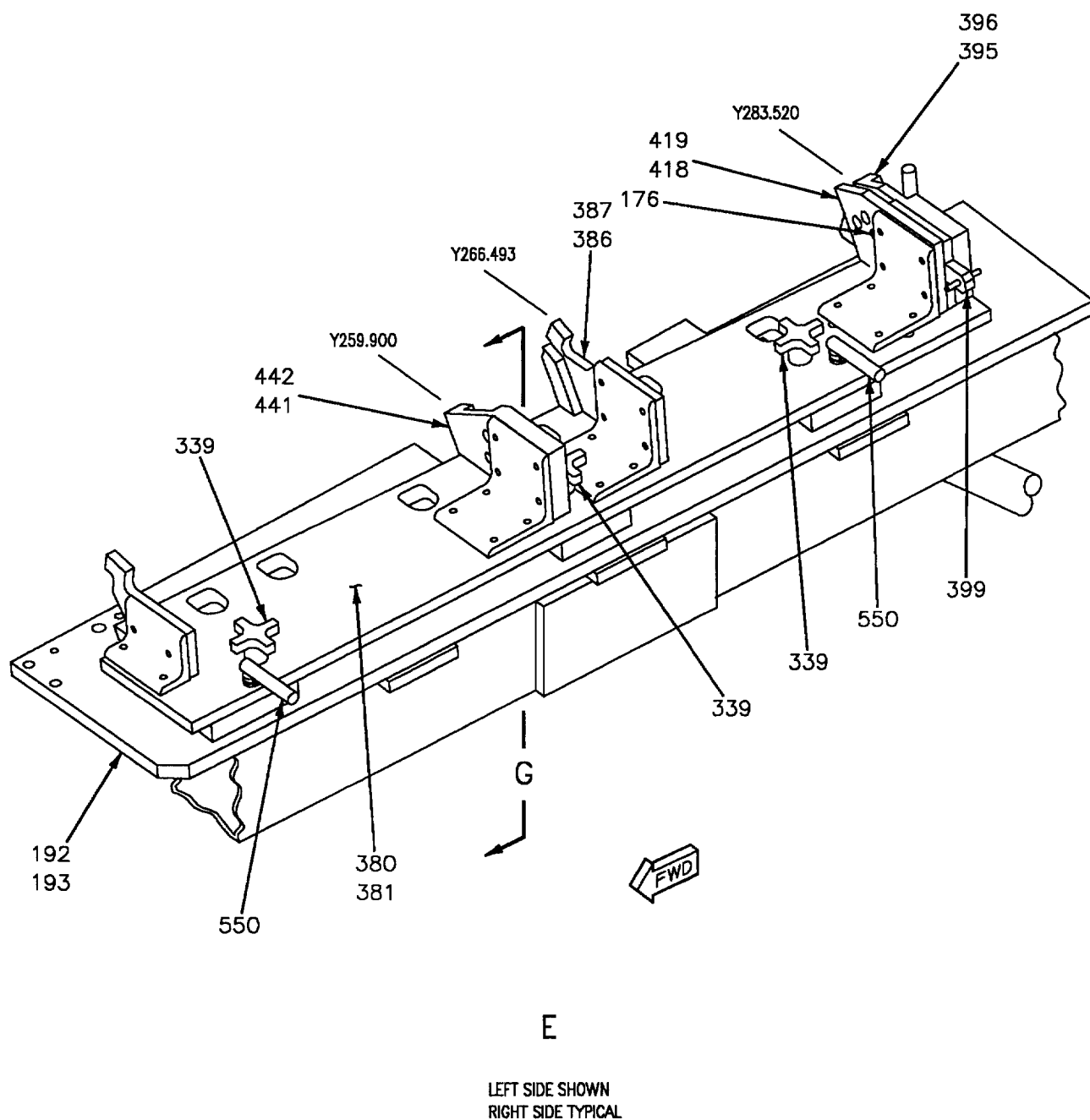


Figure 7. Replacement - Intercostal (Sheet 5)

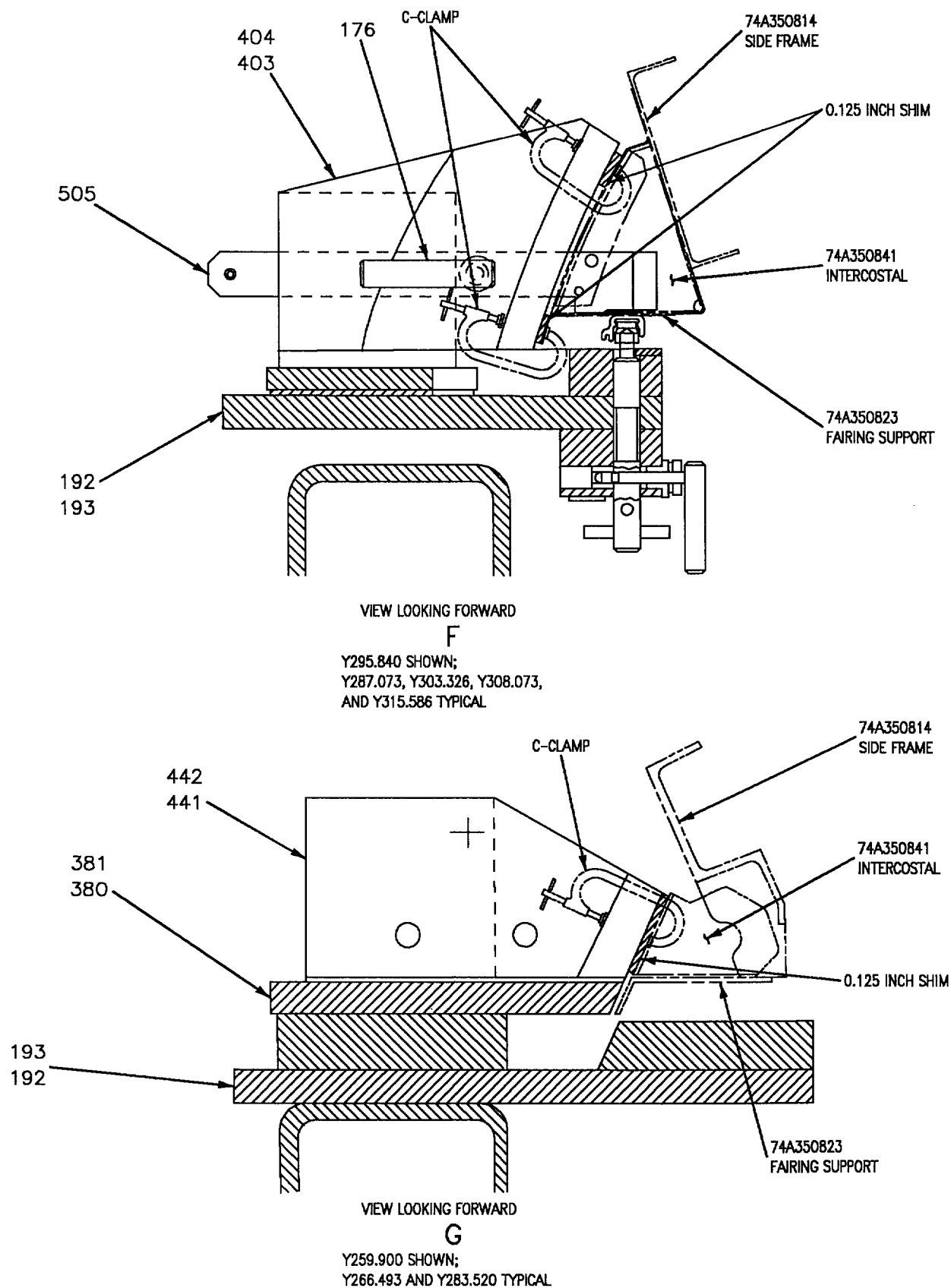


Figure 7. Replacement - Intercostal (Sheet 6)

DETAIL NO.	NAME	FUNCTION
176	L-pin	Locates locator blocks in correct X, Y, and Z plane.
192, 193	Fixture base	Base of fixture to which most locators mount.
332, 334	Locator	Provides Z plane location at Y363.650.
339	Handknob	Secures forward, center, and aft bank assemblies to fixture base (detail 192, 193).
347, 372	Locator block	Provides mold line reference and clamping ability at Y342.076 left side and Y341.328 right side.
375, 376	Locator block	Provides mold line reference and clamping ability at Y323.585.
380, 381	Forward bank assembly	Contains various locators for positioning and clamping intercostals.
386, 387	Locator block	Provides mold line reference and clamping ability at Y266.493.
388, 389	Locator block	Provides mold line reference and clamping ability at Y315.586.
395, 396	Locator block	Provides mold line reference and clamping ability at Y283.520.
399	Locator block	Provides Y plane location for Y283.520 intercostal.
401, 402	Locator block	Provides mold line reference and clamping ability at Y303.326.
403, 404	Locator block	Provides mold line reference and clamping ability at Y295.840.
441, 442	Locator block	Provides mold line reference and clamping ability at Y259.900.
450, 491	Locator block	Provides Y plane location for Y342.076 intercostal on left side and Y341.328 intercostal on right side.
487, 488	Locator block	Provides Y plane location for Y350.452 intercostal.
489, 490	Locator block	Provides Y plane location for Y331.084 intercostal.
496	Locator block	Provides Y plane location for Y363.650 intercostal.
497	Locator block	Provides Y plane location for Y323.585 intercostal.
499, 500	Locator block	Provides Y plane location for Y308.073 intercostal.
501	Locator block	Provides Y plane location for Y315.586 intercostal.
502	Aft bank assembly	Contains various locators for positioning and clamping intercostals.
503	Locator block	Provides Y plane location for Y303.326 intercostal.

Figure 7. Replacement - Intercostal (Sheet 7)

DETAIL NO.	NAME	FUNCTION
504	Center bank assembly	Contains various locators for positioning and clamping intercostals.
505	Locator block	Provides Y plane location for Y295.840 intercostal.
506	Locator block	Provides Y plane location for Y287.073 intercostal.
537, 538	Locator block	Provides mold line reference and clamping ability at Y363.650.
539, 540	Locator block	Provides mold line reference and clamping ability at Y350.452.
541, 542	Locator block	Provides mold line reference and clamping ability at Y331.084.
543, 544	Locator block	Provides mold line reference and clamping ability at Y308.073.
545, 546	Locator block	Provides mold line reference and clamping ability at Y287.073.
550	L-pin	Locates forward, center, and aft bank assemblies to fixture base (detail 192, 193).

Figure 7. Replacement - Intercostal (Sheet 8)

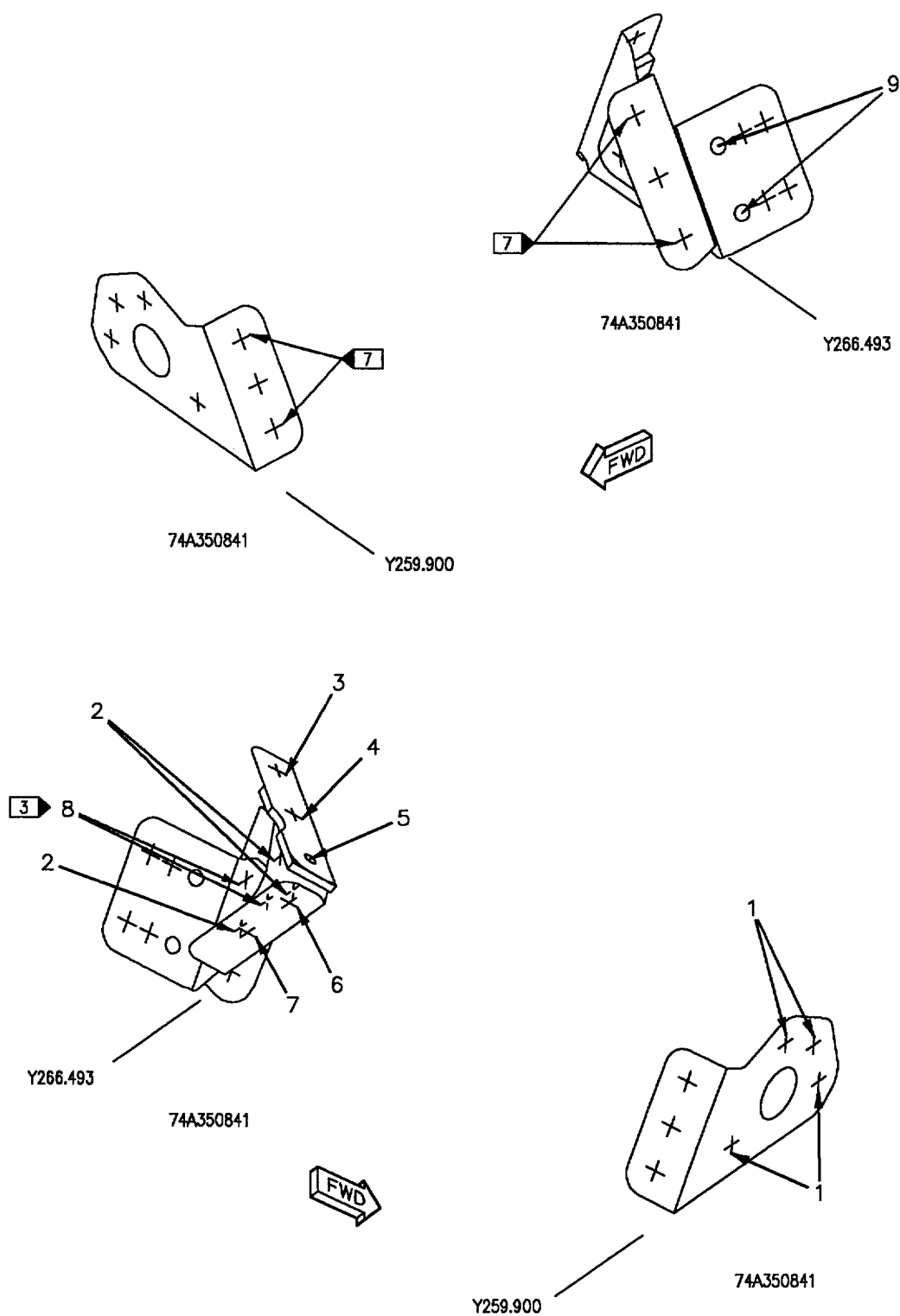


Figure 8. Intercostal, 74A350841, Fastener Index (Sheet 1)

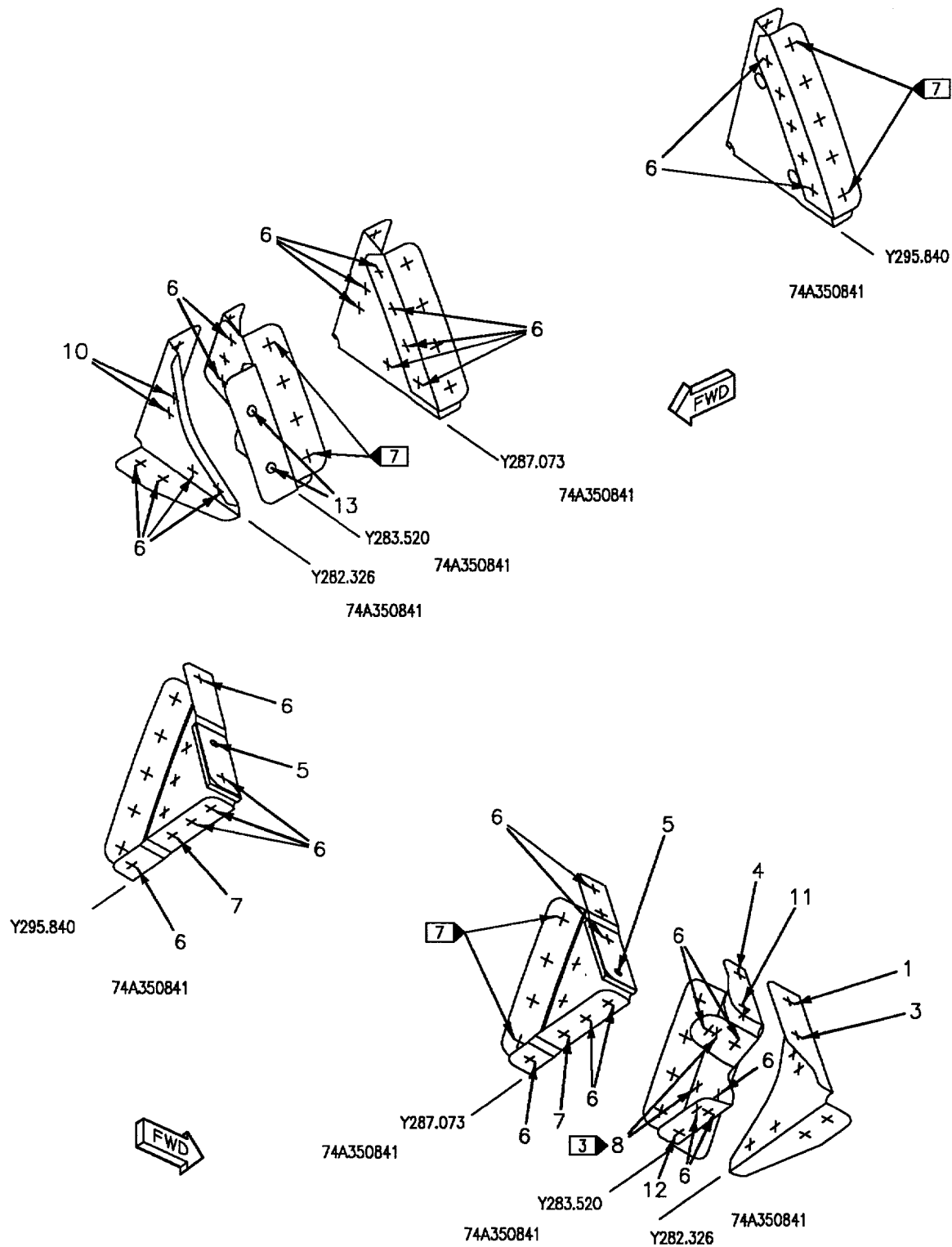


Figure 8. Intercostal, 74A350841, Fastener Index (Sheet 2)

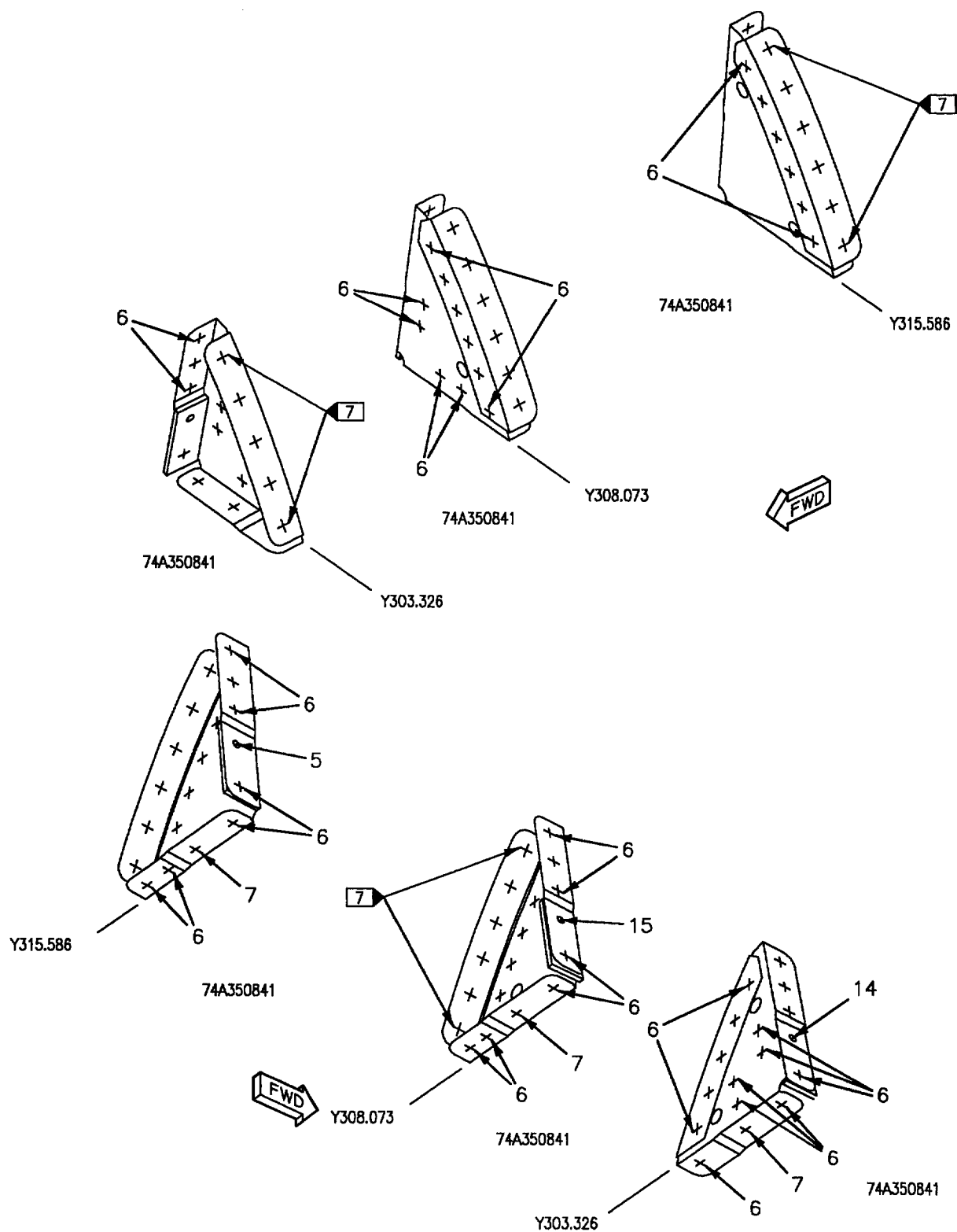


Figure 8. Intercostal, 74A350841, Fastener Index (Sheet 3)

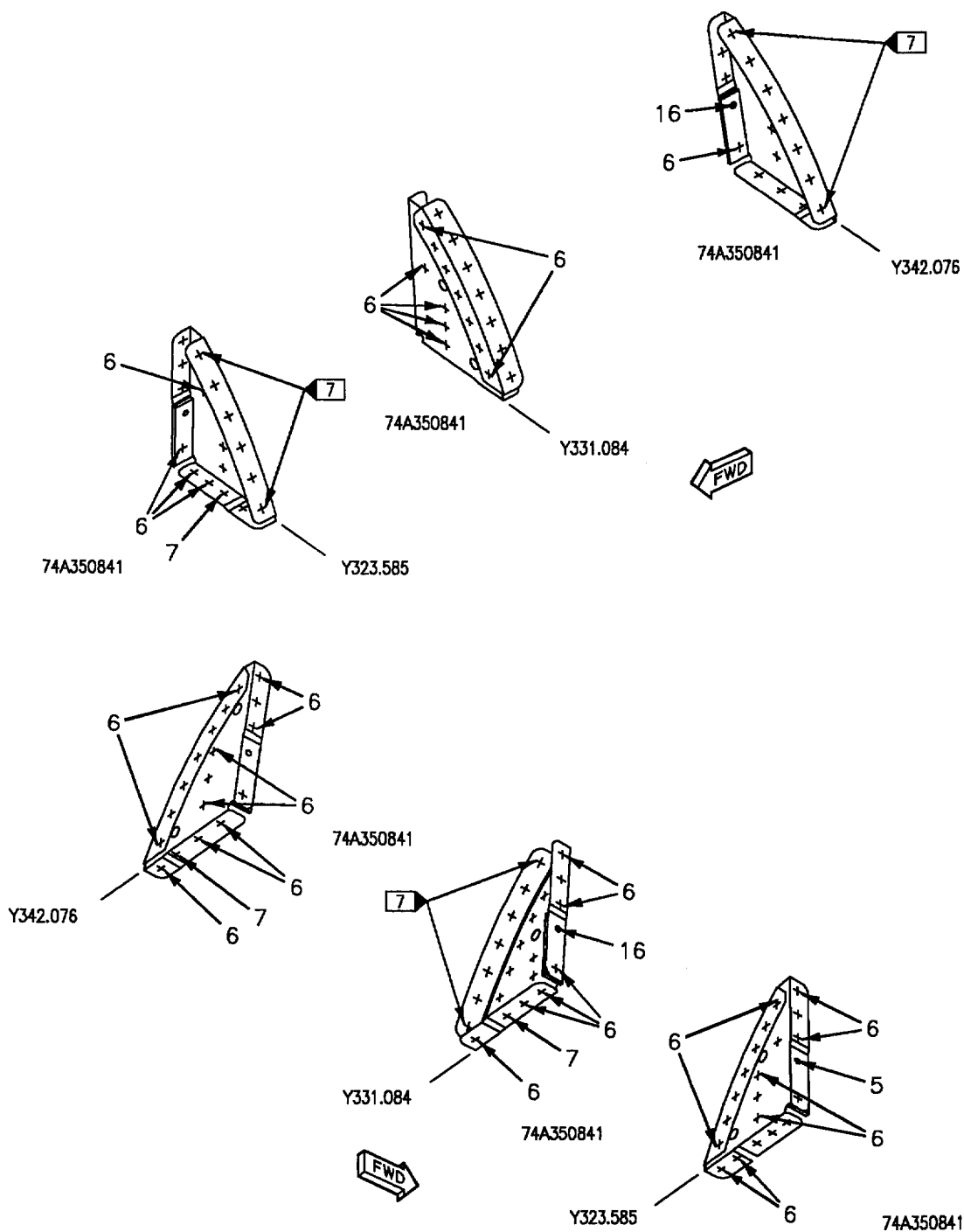


Figure 8. Intercostal, 74A350841, Fastener Index (Sheet 4)

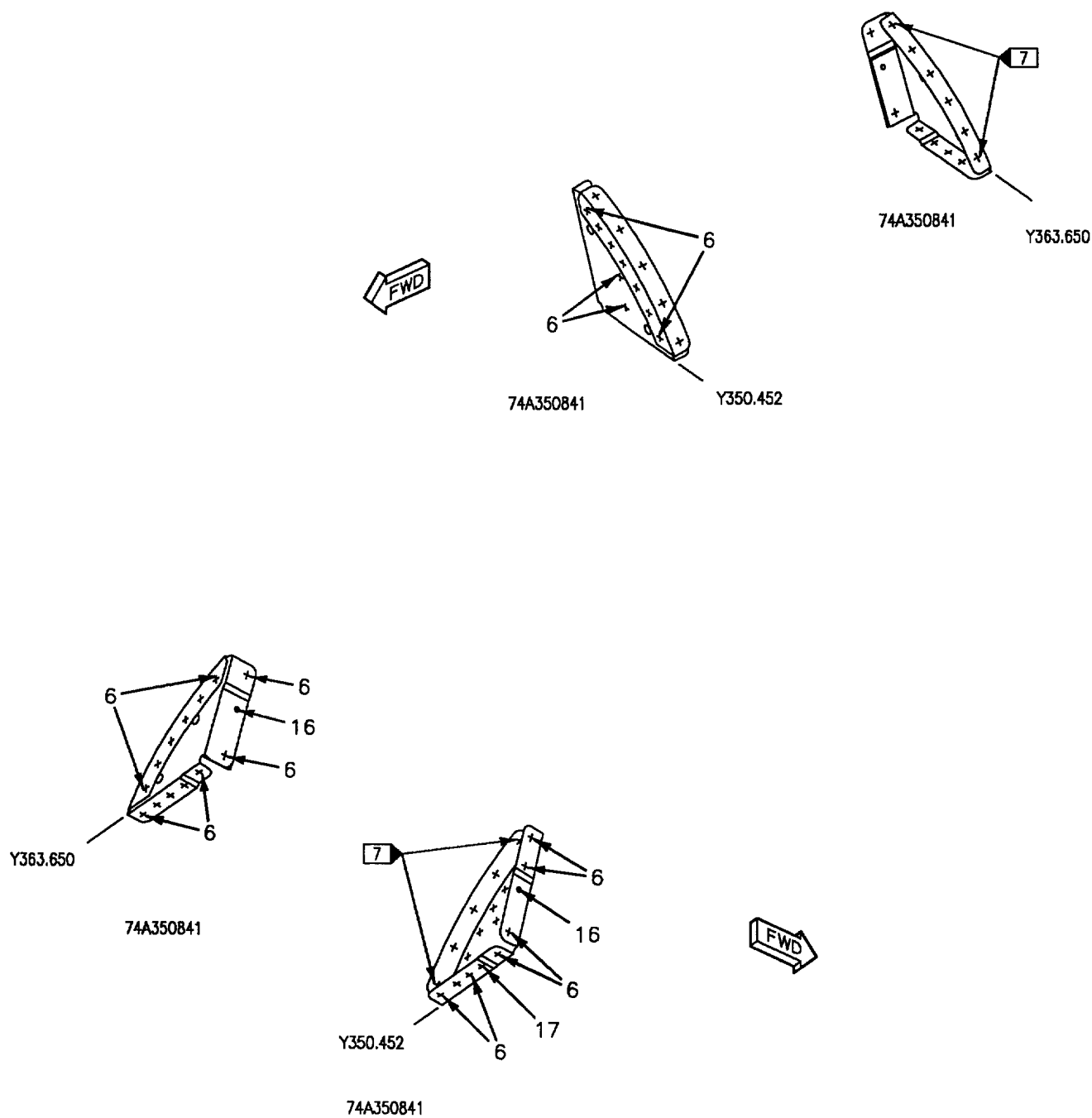


Figure 8. Intercostal, 74A350841, Fastener Index (Sheet 5)















INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO.	FASTENER 	WASHER	SPACER BUSHING	RETAINER
1			0.160 +0.004 -0.000	T.F.I.M. 25.0202-142 NOMINAL 	NAS1398D5A4			
2			0.160 +0.004 -0.000	T.F.I.M. 25.0202-142 NOMINAL 	NAS1398D5A3			
3			0.160 +0.004 -0.000	T.F.I.M. 25.0202-142 NOMINAL 	NAS1398D5A6			
4			0.160 +0.004 -0.000	T.F.I.M. 25.0202-142 NOMINAL 	NAS1398D5A5			
5			0.1635 +0.0025 -0.0000		HLT312TA5-3			SW1000-5M
6			0.161 +0.005 -0.000	T.F.I.M. 25.0202-142 NOMINAL 	MS20470AD5			
7			0.161 +0.005 -0.000	T.F.I.M. 25.0202-142 NOMINAL 	MS20426AD5			
8			0.128 +0.004 -0.000		1247-406 			
9			0.195 +0.007 -0.000					F50340-3-1  
10			0.128 +0.006 -0.000		MS20470AD4			
11			0.160 +0.004 -0.000	T.F.I.M. 25.0202-142 NOMINAL 	NAS1398D5A7			
12			0.160 +0.004 -0.000	T.F.I.M. 25.0202-142 NOMINAL 	NAS1399C5A3			
13			0.195 +0.007 -0.000					F50339-3-1  
14			0.1635 +0.0025 -0.0000		HLT312TB6-7	SW2000-5W		SW2000-5A
15			0.1635 +0.0025 -0.0000		HLT312TA5-8	SW2000-5W		SW2000-5A

Figure 8. Intercostal, 74A350841, Fastener Index (Sheet 6)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO.	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
16			0.1635 +0.0025 -0.0000		HLT312TA5-4			SW2000-5M
17			0.160 +0.004 -0.000	T.F.I.M. 25.0202- 142 NOMINAL 2	NAS1399D5A3			
<p style="text-align: center;">LEGEND</p> <p>1 For oversize repair fasteners, (A1-F18AC-SRM-200, WP004 07).</p> <p>2 Part of RE274350006-1 canopy repair kit.</p> <p>3 Critical fastener, no substitution permitted.</p> <p>4 Attach plate nut using CSR904B-3-3 rivets.</p> <p>5 Hole diameter is 0.098 +0.005 -0.000.</p> <p>6 Attach plate nut using 1415-0310 rivets.</p> <p>7 See figure 6 for fastener information.</p>								

Figure 8. Intercostal, 74A350841, Fastener Index (Sheet 7)

9. CHANNEL ASSEMBLY, 74A350826, REPLACEMENT. See figure 9.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, F/A-18B Canopy	RE174350006-1
Torque Wrench, 0 - 300 Inch Pounds	-

Materials Required

Nomenclature	Specification or Part Number
Barrier Material	MIL-B-131, Class 1
Cheesecloth	CCC-C-440, Type 1, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108
Isopropyl Alcohol	TT-I-735
Sealing Compound	MIL-S-83430, Class A-1/2



To prevent damage to transparency, be sure barrier material is installed between transparency and ethyl foam. See canopy preparation (WP006 01).

NOTE

The 74A350826 channel assembly is made up of two sections of upper channel angles, lower channel angles, and channel brackets. One section extends from Y244.941 thru Y280.000 and the other section extends from Y282.250 thru Y353.980.

10. REMOVAL.

a. Remove fasteners attaching upper channel angle to lower channel angle.

b. Remove fasteners attaching upper and lower channel angles to channel brackets.

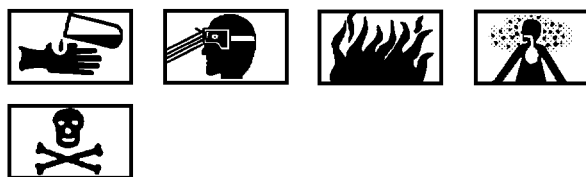
c. Remove fasteners attaching upper and lower channel angles to mating structure.

d. Remove upper and lower channel angles from canopy structure.

NOTE

The 74A350826 channel brackets that are attached to 74A350814 side frame flanges may remain installed if no interference from other maintenance is expected.

e. Remove fasteners attaching channel brackets to 74A350814 side frame flanges.



Isopropyl Alcohol

2

f. Clean all residual sealant from channel assembly and mating structure using plastic scraper and cheesecloth moistened with isopropyl alcohol.

11. INSTALLATION.

NOTE

If channel assembly is not damaged and was removed to allow other maintenance, reinstall per step a. If channel assembly was damaged and required replacement of upper channel angle, lower channel angle, or channel bracket, reinstall per step b and/or step c.

a. Install undamaged channel assembly:



Sealing Compound

7

(1) Lay seal mating surfaces between upper and lower channel angles, channel brackets, and mating structure. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

NOTE

If channel brackets were removed from 74A350814 side frame flanges, reinstall per substep (2).

(2) Locate channel bracket on 74A350814 side frame flange and wet install fasteners. For fastener information, figure 9. For fastener sealing (A1-F18AC-SRM-200, WP011 00).

NOTE

Lower channel angle must be installed before upper channel angle because of type of fasteners used in installation.

(3) Locate lower channel angle on mating structure and install temporary fasteners to hold in correct position.

(4) Wet install fasteners. For fastener identification, figure 9. For fastener sealing (A1-F18AC-SRM-200, WP011 00).

(5) Locate upper channel angle on mating structure and install temporary fasteners to hold in correct position.

(6) Wet install fasteners. For fastener identification, figure 9. For fastener sealing (A1-F18AC-SRM-200, WP011 00).

(7) Apply finish system as required (A1-F18AC-SRM-500, WP021 00).

b. Install new channel bracket(s):

NOTE

Substep (1) is preferred method of locating fastener hole pattern. Substep (2) thru (7) is alternate method.

(1) Transfer hole pattern from damaged channel bracket. For hole diameters, figure 9.

or

(2) Locate new channel bracket on 74A350814 side frame flange and clamp in place.



Use care when back drilling not to elongate holes in 74A350814 side frame flange.

(3) Back drill holes in channel bracket(s) using existing holes in 74A350814 side frame flange as guide. For fastener location and hole diameters, figure 9.

(4) Remove C-clamp and install temporary fasteners to hold channel bracket in place.

(5) Locate upper and lower channel angles on 74A350814 side frame and install temporary fasteners to hold in correct position.

(6) Back drill holes in flange of channel bracket using existing holes in upper and lower channel angle as guide. For fastener location and hole diameter, figure 9.

(7) Remove temporary fasteners, channel angles, and new channel bracket from mating structure.

(8) Apply finish system, as required, to new channel bracket and any other areas requiring finish system touchup (A1-F18AC-SRM-500, WP021 00).



Sealing Compound

7

(9) Fay seal mating surfaces between channel brackets, channel angles, and 74A350814 side frame. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

(10) Locate new channel bracket on 74A350814 side frame.

(11) Wet install fasteners. For fastener information, figure 9. For fastener sealing (A1-F18AC-SRM-200, WP011 00).

NOTE

Lower channel angle must be installed before upper channel angle because of type of fasteners used in installation.

(12) Locate lower channel angle on mating structure and install temporary fasteners to hold in correct position.

(13) Wet install fasteners. For fastener identification, figure 9. For fastener sealing (A1-F18AC-SRM-200, WP011 00).

(14) Locate upper channel angle on mating structure and install temporary fasteners to hold in correct position.

(15) Wet install fasteners. For fastener identification, figure 9. For fastener sealing (A1-F18AC-SRM-200, WP011 00).

(16) Apply finish system as required (A1-F18AC-SRM-500, WP021 00).

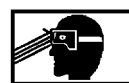
c. Install new upper and/or lower channel angle(s):

NOTE

If upper or lower channel angles are damaged beyond use, locate blind holes in new upper or lower channel angle(s) (A1-F18AC-SRM-200, WP004 03).

(1) Transfer hole pattern in new upper and/or lower channel angle using existing holes in removed channel angle as guide. For fastener location and hole diameter, figure 9.

(2) Apply finish system, as required, to new channel angle and any other areas requiring finish system touchup (A1-F18AC-SRM-500, WP021 00).



Sealing Compound

7

(3) Fay seal mating surfaces between new channel angles, channel brackets, and 74A350814 side frame. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

NOTE

Lower channel angle must be installed before upper channel angle because of type of fasteners used in installation.

(4) Locate lower channel angle on mating structure and install temporary fasteners to hold in correct position.

(5) Wet install fasteners. For fastener identification, figure 9. For fastener sealing (A1-F18AC-SRM-200, WP011 00).

(6) Locate upper channel angle on mating structure and install temporary fasteners to hold in correct position.

(7) Wet install fasteners. For fastener identification, figure 9. For fastener sealing (A1-F18AC-SRM-200, WP011 00).

(8) Apply finish system as required to repair area (A1-F18AC-SRM-500, WP021 00).

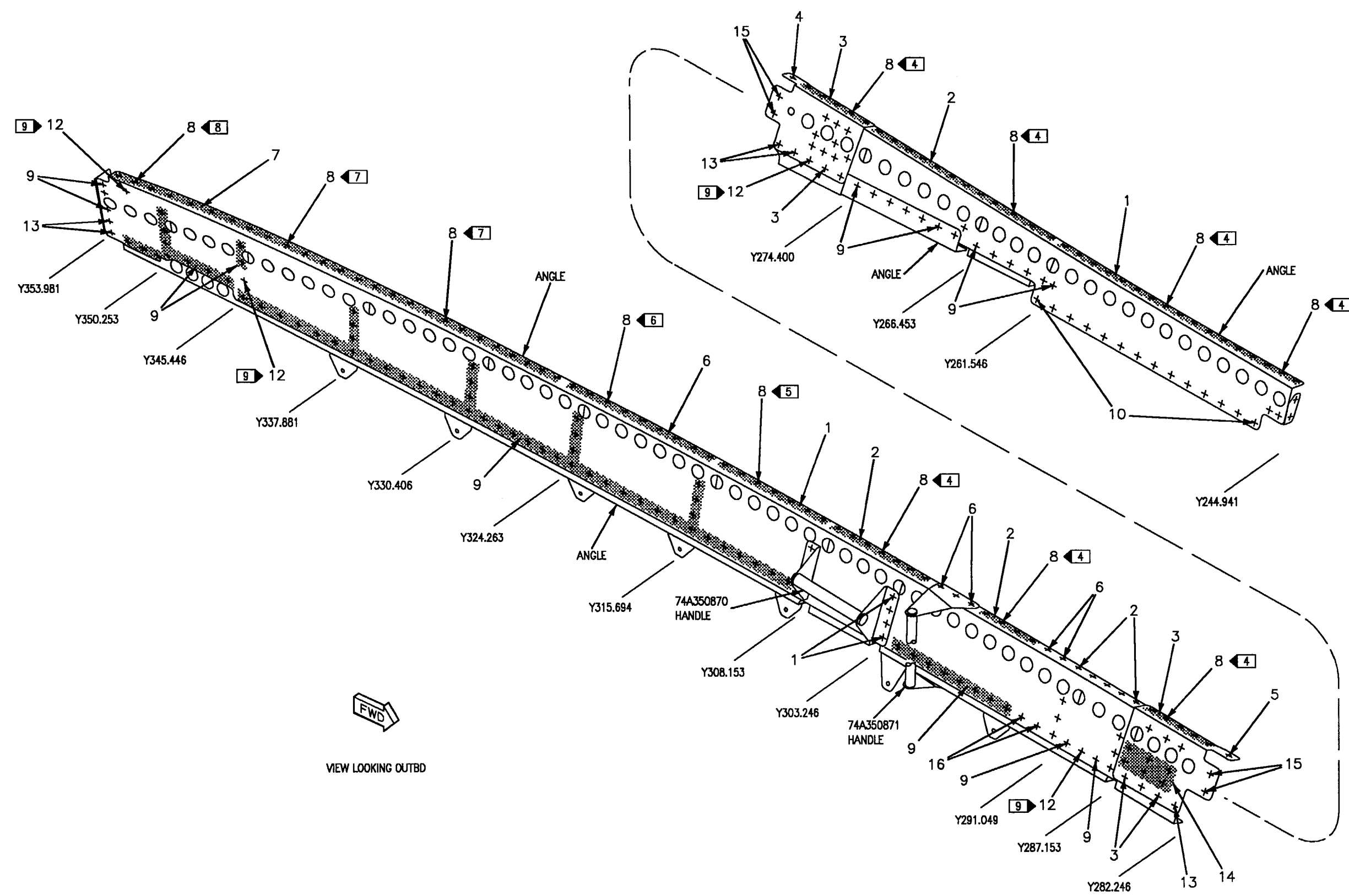
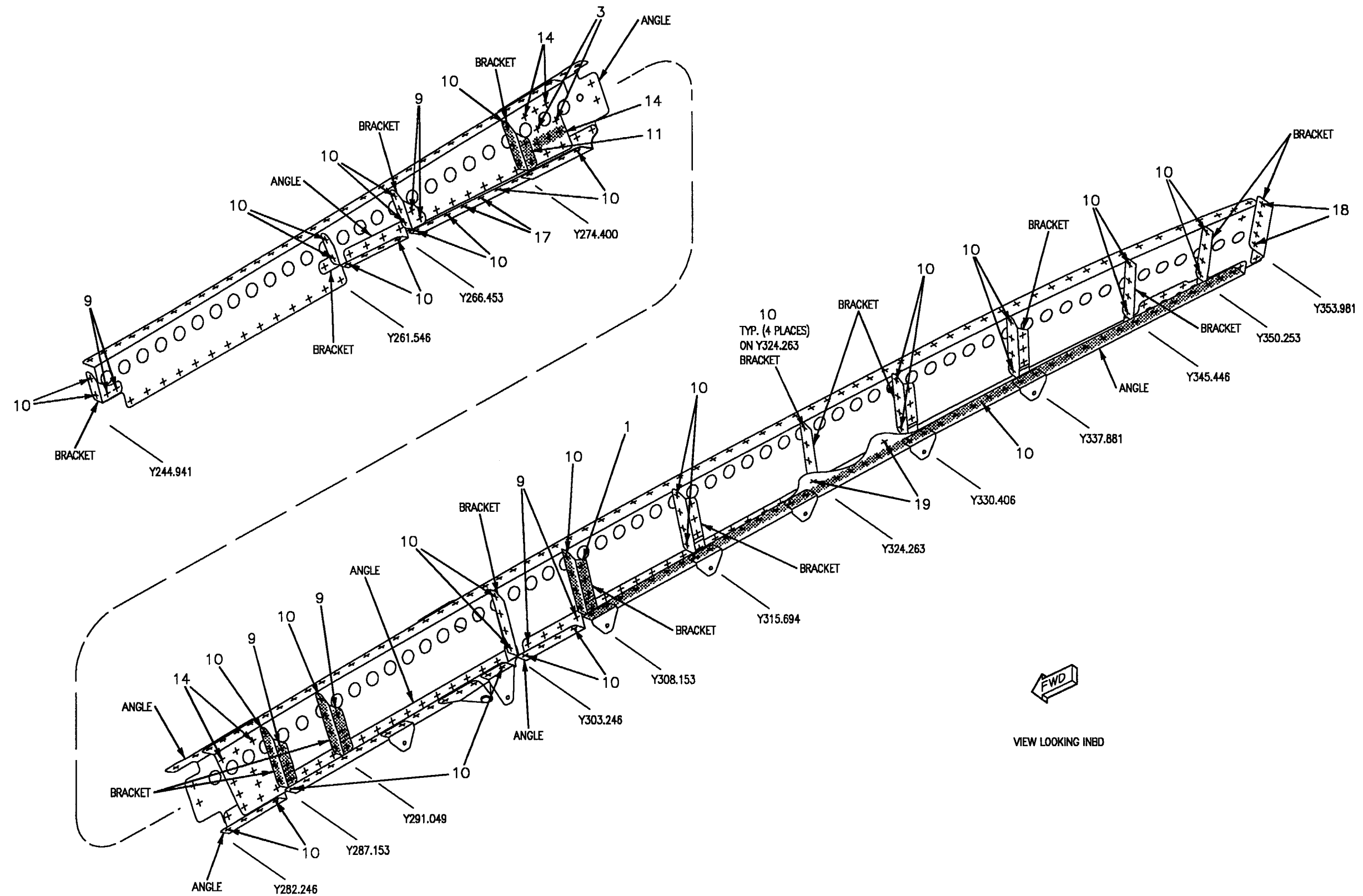


Figure 9.

Figure 9. Channel Assembly, 74A350826, Fastener Index (Sheet 1)

06020901
Figure 9.







INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 	FASTENER 	WASHER	SPACER BUSHING	RETAINER
1			0.165 +0.003 -0.000	T.F.I.M.25.0201074 0.1562 DRILL T.F.I.M.25.1111647 0.1647 REAMER	NAS167108L3			
2			0.165 +0.003 -0.000	T.F.I.M.25.0201074 0.1562 DRILL T.F.I.M.25.1111647 0.1647 REAMER	NAS167308L2			
3			0.165 +0.003 -0.000	T.F.I.M.25.0201074 0.1562 DRILL T.F.I.M.25.1111647 0.1647 REAMER	NAS167308L3			
4			0.260 +0.003 -0.000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0204154 0.2460 DRILL T.F.I.M.25.1172602 0.2602 REAMER	NAS16714L6			
5			0.260 +0.003 -0.000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0204154 0.2460 DRILL T.F.I.M.25.1172602 0.2602 REAMER	NAS16714L7			
6			0.165 +0.003 -0.000	T.F.I.M.25.0201074 0.1562 DRILL T.F.I.M.25.1111647 0.1647 REAMER	NAS167308L4			
7			0.165 +0.003 -0.000	T.F.I.M.25.0201074 0.1562 DRILL T.F.I.M.25.1111647 0.1647 REAMER	NAS167308L5			
8			0.165 +0.003 -0.000					ST3M725C08M  
9			0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1398D5A2			
10			0.161 +0.005 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	MS20470AD5			
11			0.165 +0.003 -0.000	T.F.I.M.25.0201074 0.1562 DRILL T.F.I.M.25.1111647 0.1647 REAMER	NAS167108L4			
12			0.195 +0.007 -0.000					ST3M4433A1 

Figure 9. Channel Assembly, 74A350826, Fastener Index (Sheet 3)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 	FASTENER 	WASHER	SPACER BUSHING	RETAINER
13			0.165 +0.003 -0.000	T.F.I.M.25.0201074 0.1562 DRILL T.F.I.M.25.1111647 0.1647 REAMER	NAS167108L2			
14			0.199 +0.003 -0.000	T.F.I.M.25.0201098 0.1875 DRILL T.F.I.M.25.1161992 0.1992 REAMER	NAS16713L3			
15			0.2495 +0.0025 -0.0000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0201130 0.2344 DRILL T.F.I.M.25.1112497 0.2497 REAMER	NAS654V4	AN960JD416		3M448C4M82
16			0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1398D5A4			
17			0.199 +0.003 -0.000	T.F.I.M.25.0201098 0.1875 DRILL T.F.I.M.25.1161992 0.1992 REAMER	NAS16713L4			
18			0.1895 +0.0025 -0.0000	T.F.I.M.25.0201086 0.1719 DRILL T.F.I.M.25.1111852 0.1852 REAMER	ST3M759C38 PIN			ST3M526C3M COLLAR
19			0.375 +0.007 -0.000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0204204 0.3750 DRILL	NAS676V14	AN960C616		ST3M4416M NUT  ST3M475C6 RETAINER

LEGEND












-  For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07).
-  Part of 74D110325-1001 aircraft structure repair tool kit (A1-F18AC-SRM-200, WP004 16).
-  Hole diameter for fasteners attaching plate nut is 0.097 +0.004 -0.000.
-  Attach plate nut using ST3M793-3-2 fasteners.
-  Attach plate nut using ST3M793-3-3 fasteners.
-  Attach plate nut using ST3M793-3-4 fasteners.
-  Attach plate nut using ST3M793-3-5 fasteners.
-  Attach plate nut using ST3M793-3-6 fasteners.
-  Attach plate nut using ST3M667-0306 fasteners.
-  Apply 160-190 inch pounds of torque to nut.
-  Right side only.

Figure 9. Channel Assembly, 74A350826, Fastener Index (Sheet 4)

12. LOWER FAIRING SUPPORT, 74A350823, REPLACEMENT. See figure 10.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, F/A-18B Canopy	RE174350006-1

Materials Required

Nomenclature	Specification or Part Number
Barrier Material	MIL-B-131, Class 1
Cheesecloth	CCC-C-440, Type 1, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108
Isopropyl Alcohol	TT-I-735
Sealing Compound	MIL-S-83430, Class A-1/2
Sealing Compound	MIL-S-83430, Class B-1/2



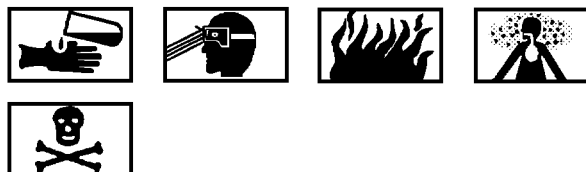
To prevent damage to transparency, be sure barrier material is installed between transparency and ethyl foam. See canopy preparation (WP006 01).

- Load canopy into fixture (WP006 01).
- Remove transparency (WP006 03).
- Remove 74A350824 side fairing. See figure 6 for fastener location.
- Remove 74A350826 channel assembly. See figure 9 for fastener location.
- Remove 74A350841 intercostal(s), as required. See figure 8 for fastener location.

f. Remove fasteners attaching seal retainers to mating structure.

g. Remove fasteners attaching damaged lower fairing support to mating structure. See figure 11 for fastener location.

h. Remove damaged lower fairing support.



Isopropyl Alcohol

2

i. Clean all residual sealant from mating structure using plastic scraper and cheesecloth moistened with isopropyl alcohol.

NOTE

The 74A350823 lower fairing support is made up of various sections of angles. Locate each angle in tool fixture before transferring hole pattern or assembling with fasteners.

j. Position new lower fairing support over seal retainers and in contact with 74A350841 intercostals and 74A350814 side frame. See figure 10.

k. Slide lower fairing support locators (detail 332, 334) upward and secure in position with L-pin (detail 176). See detail B.

l. Raise locator pin (details 321, 408, and 465) inside seal retainers and rotate 90° until roll pin (detail 521) points forward and aft. See details C, F, and G.

m. Secure locator pin (details 321, 408, and 465) by inserting L-pin (detail 207). See details C, F, and G.

n. Locate forward, center, and aft bank assembly (details 380, 381, 502, and 504) on fixture base (detail 192, 193) using L-pins (detail 550) six places and secure by installing handknobs (detail 339) nine places. See details A, D, and E.

NOTE

Locator block (details 399, 487, 489, 491, 496, 497, 499, 501, 503, 505, and 506) are used on left side. Locator block (details 399, 450, 488, 490, 496, 497, 500, 501, 503, 505, and 506) are used on right side.

o. Slide locator block (details 399, 450, 487, 488, 489, 490, 491, 496, 497, 499, 500, 501, 503, 505, and 506) inboard and secure in position using L-pin (detail 176). See details A, D, and E.

p. Locate lower fairing support in X plane location:

(1) Position inboard flange of support net with 74A350814 side frame.

(2) Position outboard surface of fairing joggle net with inboard surface of locator block (details 399, 487, 488, 489, 490, 491, 497, 499, 500, 503, and 506). See details C, D, E, F, and G.

NOTE

Locator block (details 372, 375, 389, 395, 401, 403, 537, 539, 541, and 545) are used on left side. Locator block (details 347, 376, 388, 396, 402, 404, 538, 540, 542, 544, and 546) are used on right side.

(3) Insert 0.125 inch shim between outboard flange of lower fairing support and inboard surface of locator block (details 347, 372, 375, 376, 388, 389, 395, 396, 401, 402, 403, 404, 537, 538, 539, 540, 541, 542, 543, 544, 545, and 546) and secure in place using C-clamp. See details C, D, E, F, and G.

q. Locate lower fairing support in Y plane location:

(1) Position aft edge of lower fairing support even with aft surface of 74A350841 intercostal located at Y363.650.

(2) Position forward edge of lower fairing support even with forward surface of 74A350841 intercostal located at Y266.493.

r. Locate lower fairing support in Z plane location:

(1) Position bottom surface of lower fairing support net with upper surface of lower fairing support locator (details 332, 344). See detail B.

NOTE

Make sure locator pin (details 321, 408, and 465) are raised inside seal retainer and roll pin (detail 521) is positioned forward and aft. See details C, F, and G.

(2) Position bottom surface of lower fairing support net with upper surface of seal retainers.

(3) Position upper surface of lower fairing support net with bottom surface of 74A350841 intercostal flange.

s. Install lower fairing support:



Use care when back drilling not to elongate holes in mating structure.

(1) Back drill holes in lower fairing support using existing holes in mating structure as guide. See figure 11 for fastener location and hole diameter.

(2) Install 74A350841 intercostal(s) with enough temporary fasteners to hold in correct position.

(3) Back drill holes in lower fairing support using existing holes in intercostal as guide. See figures 8 and 11 for fastener location and hole diameter.

(4) Install 74A350824 side fairing with enough temporary fasteners to hold in correct position.

(5) Back drill holes in lower fairing support flange using existing holes in side fairing as guide. See figure 6 and 11 for fastener location and hole diameter.

(6) Remove 74A350824 side fairing and 74A350841 intercostal(s).

(7) Apply finish system as required to new lower fairing support and any other areas requiring finish system touch up (A1-F18AC-SRM-500, WP021 00).



Sealing Compound

7

(8) Fay surface seal interfacing surfaces on lower fairing support and mating structure. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

(9) Locate 74A350841 intercostal(s) and seal retainers.

(10) Wet install fasteners. For fastener sealing (A1-F18AC-SRM-200, WP011 00). See figure 8 for intercostal fastener information.

t. Apply fillet seal to all peripheral joints on pressure side of canopy. Fill all voids and joggles on pressure side which cannot be fay or fillet sealed (A1-F18AC-SRM-200, WP011 00). See detail H for typical example.

u. Apply finish system as required (A1-F18AC-SRM-500, WP021 00).

v. Remove C-clamps, shims, and locator bank assembly (details 380, 381, 502, and 504) from fixture base (detail 192, 193).

w. Install 74A350826 channel assembly. See paragraph 9, this WP.

x. Install 74A350824 side fairing:

(1) Fay surface seal interfacing surfaces on fairing and mating structure. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

(2) Wet install fasteners. For fastener sealing (A1-F18AC-SRM-200, WP011 00). See figure 6 for fastener information.

y. Reinstall transparency (WP006 03).

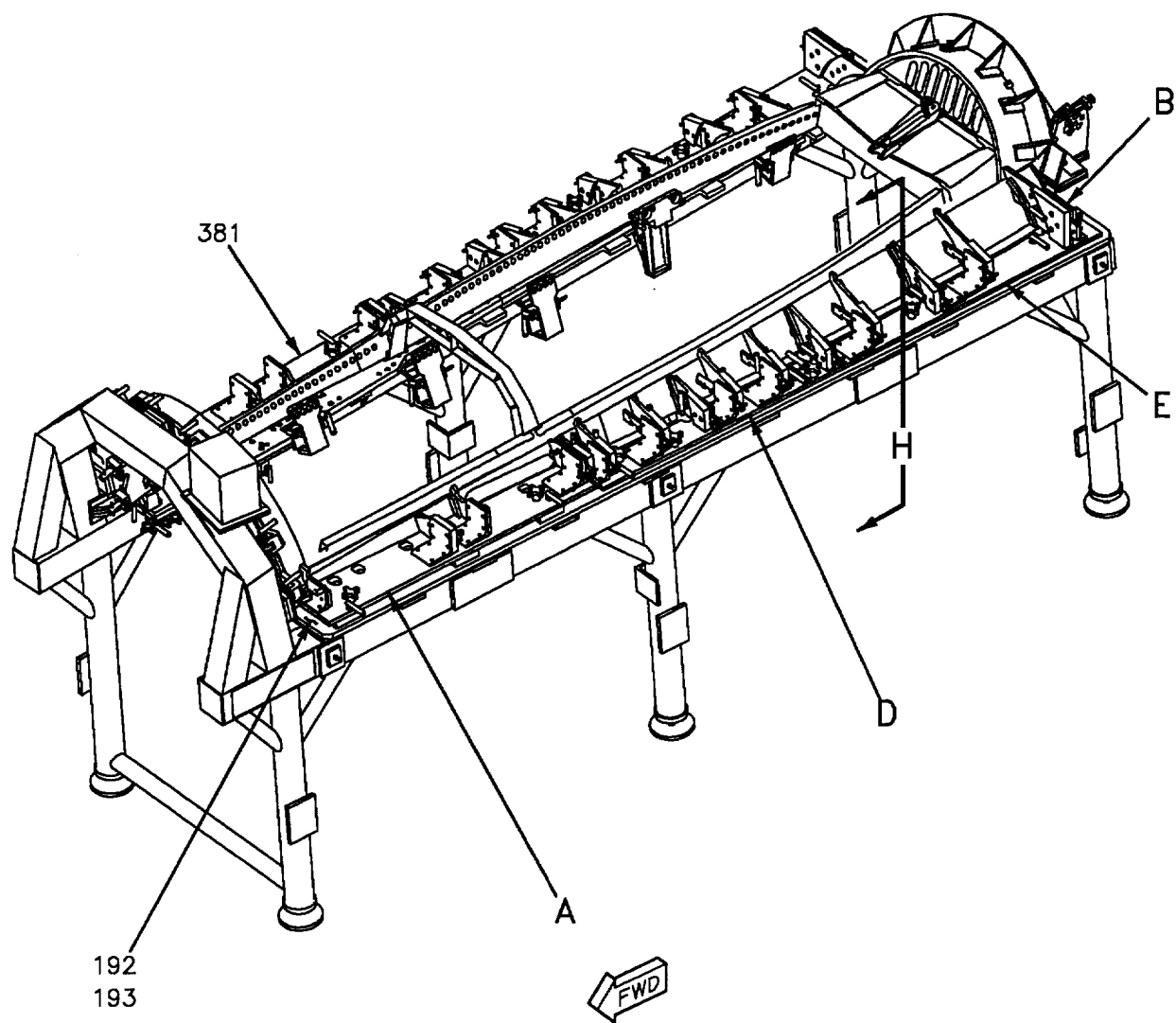


Figure 10. Replacement - Lower Fairing Support (Sheet 1)

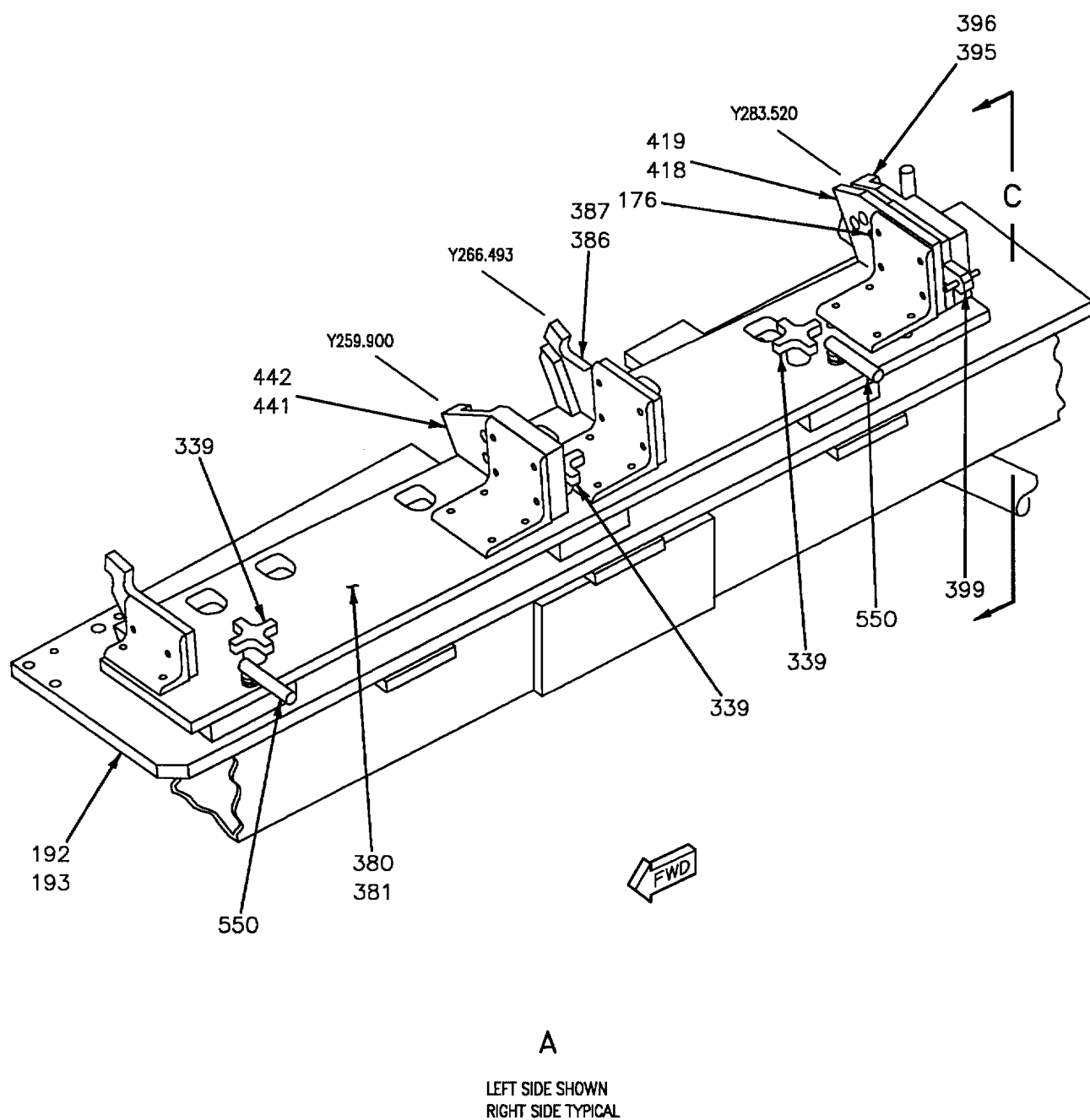


Figure 10. Replacement - Lower Fairing Support (Sheet 2)

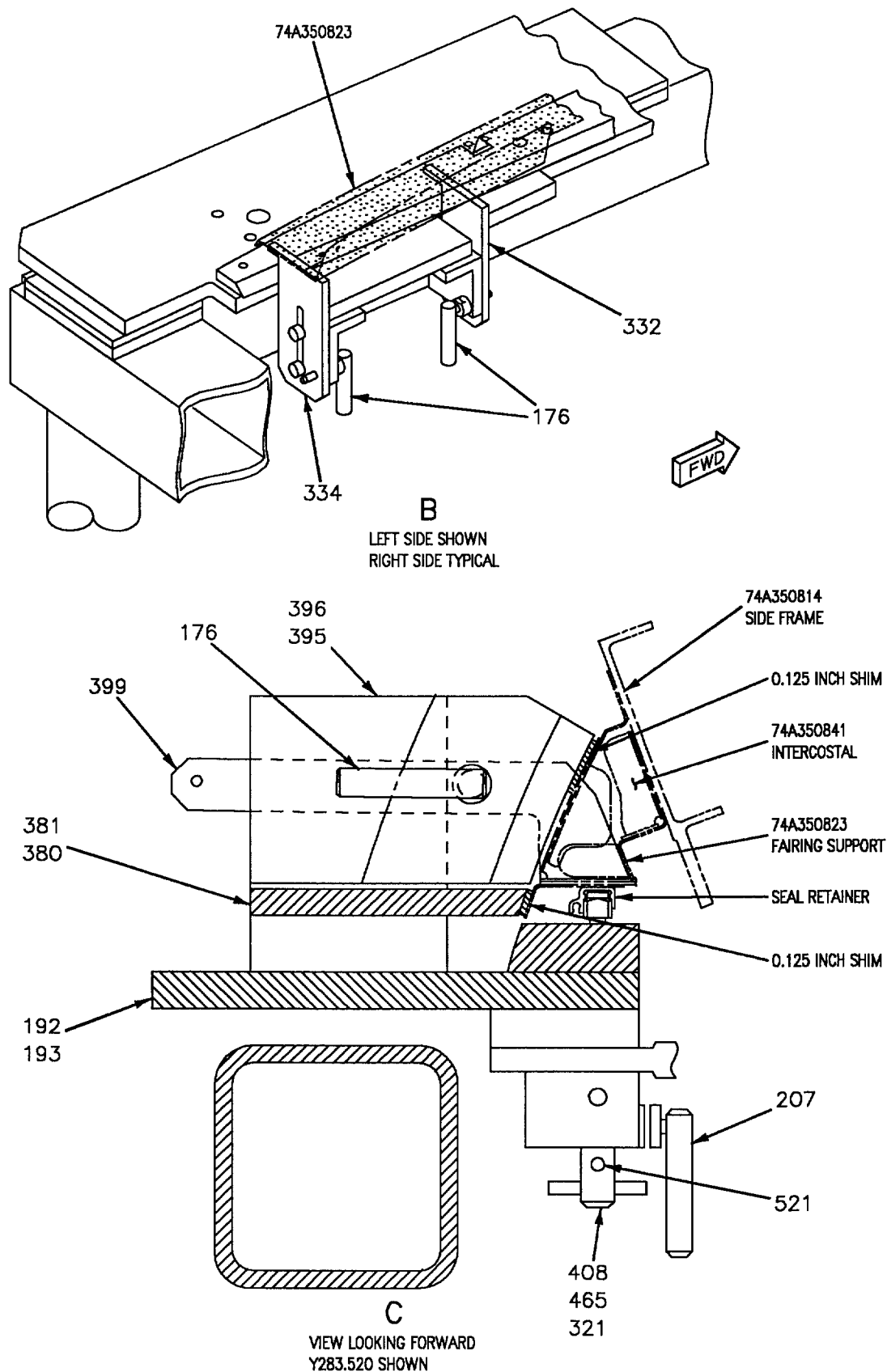


Figure 10. Replacement - Lower Fairing Support (Sheet 3)

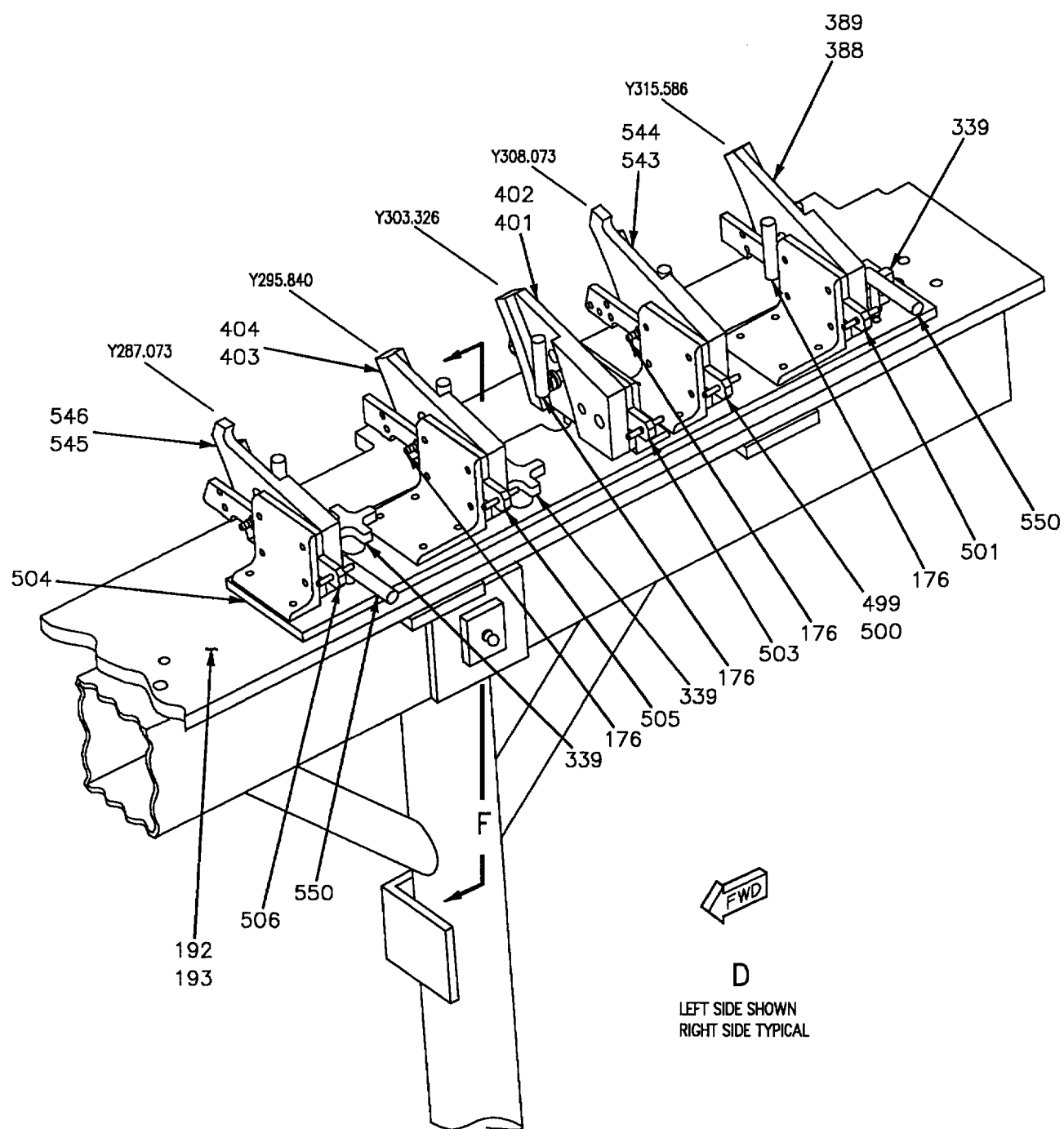


Figure 10. Replacement - Lower Fairing Support (Sheet 4)

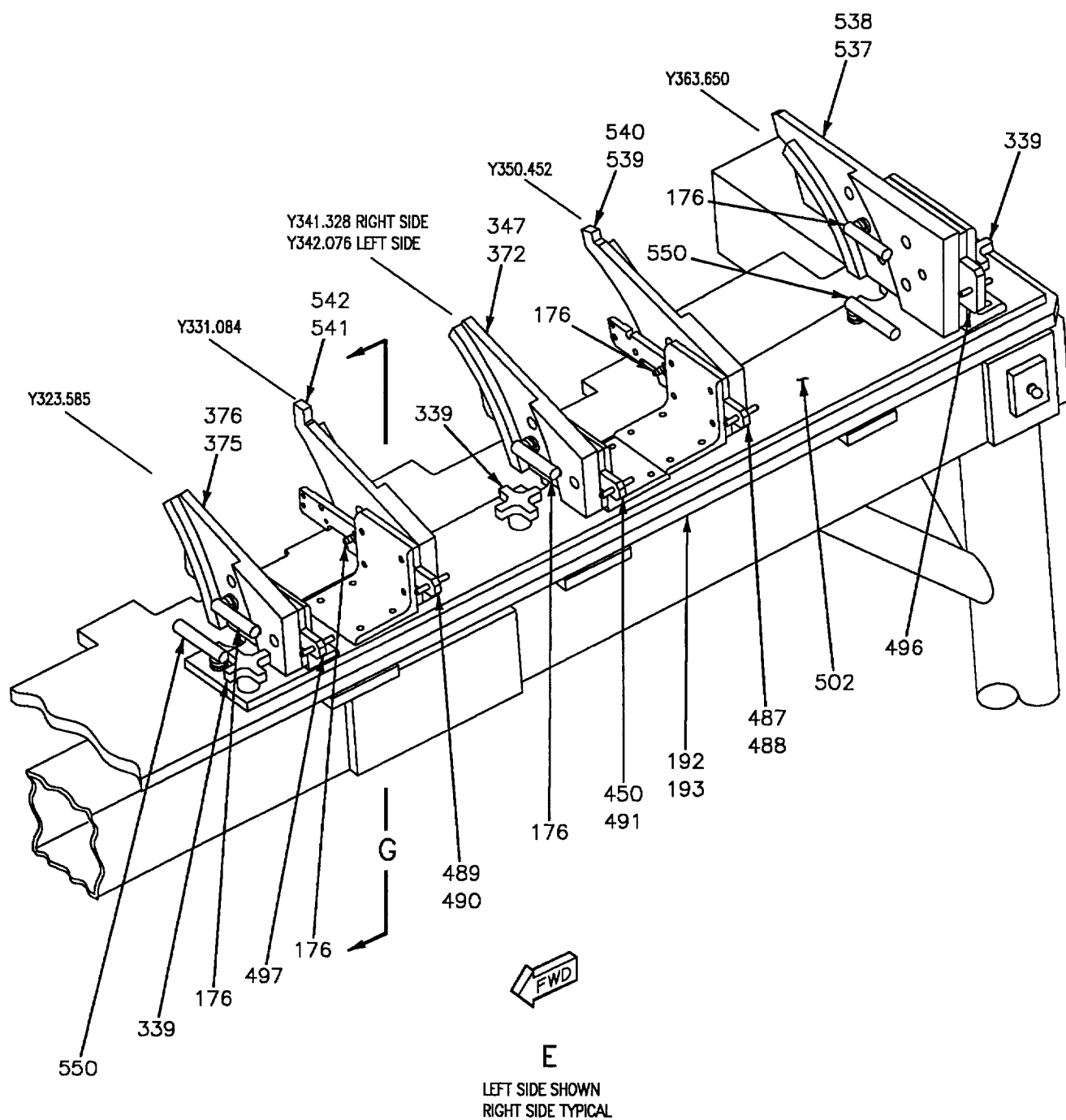


Figure 10. Replacement - Lower Fairing Support (Sheet 5)

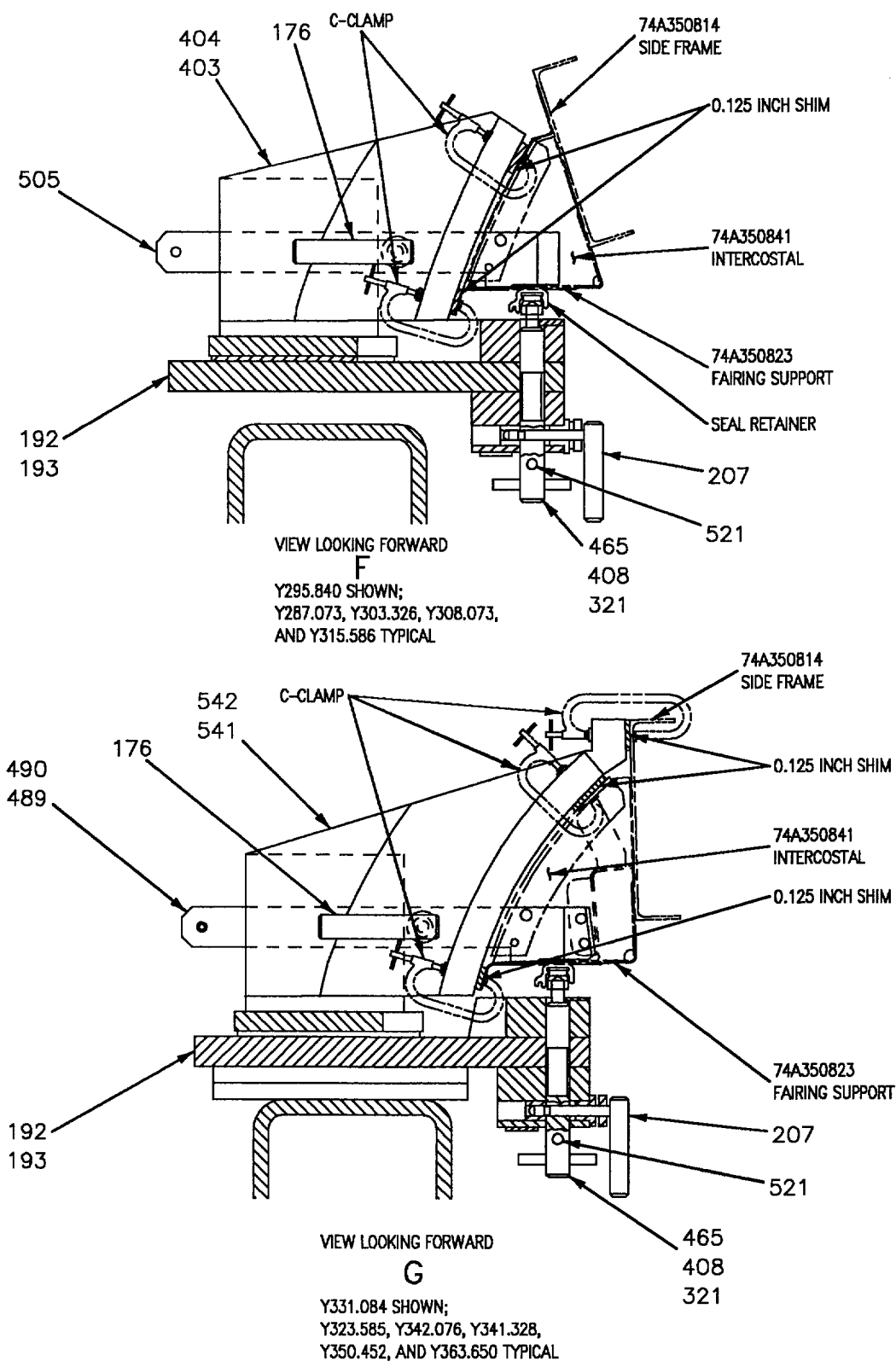


Figure 10. Replacement - Lower Fairing Support (Sheet 6)

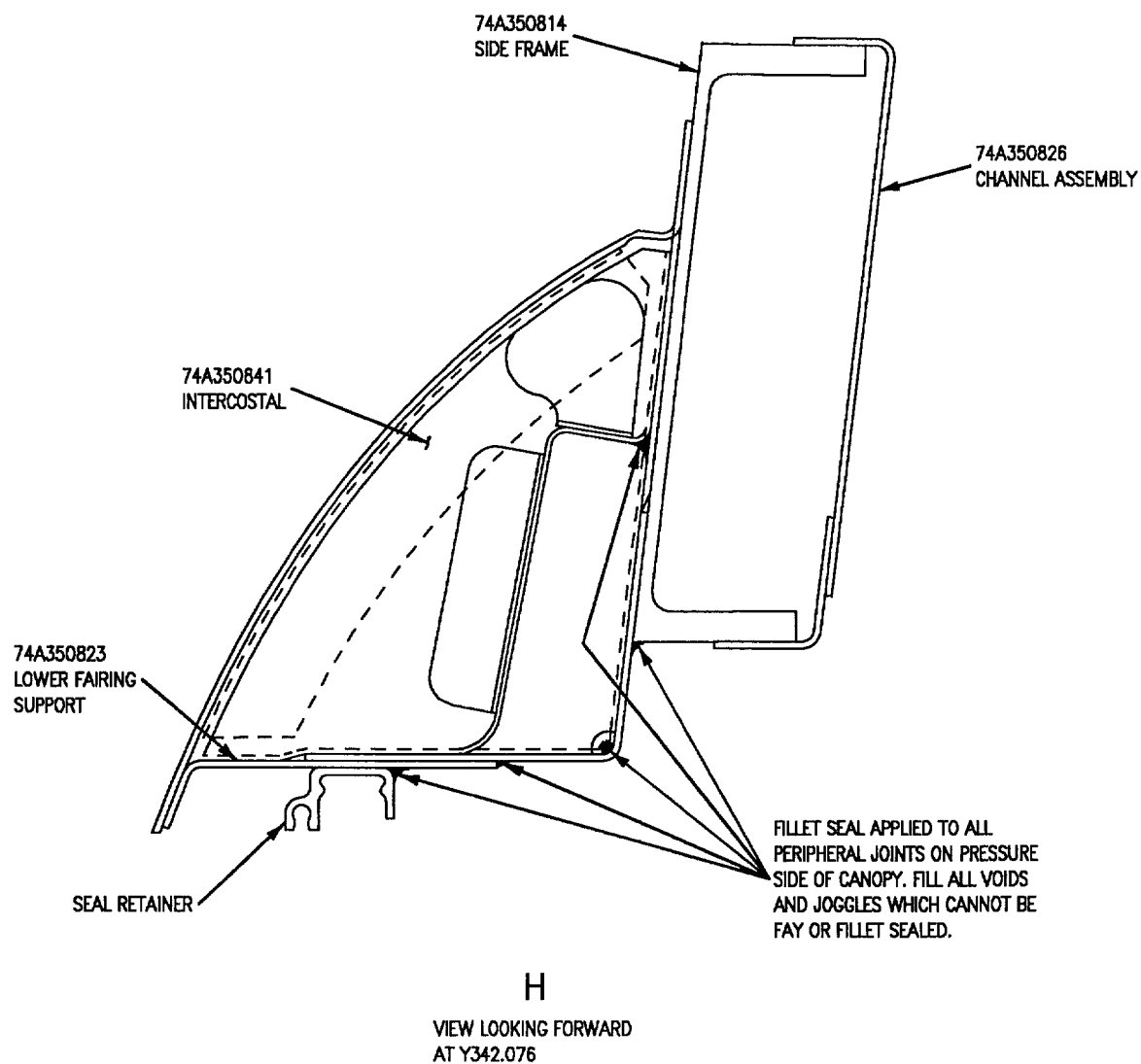


Figure 10. Replacement - Lower Fairing Support (Sheet 7)

DETAIL NO.	NAME	FUNCTION
176	L-pin	Locates locator blocks in correct X, Y, and Z plane.
192, 193	Fixture base	Base of fixture to which most locators mount.
207	L-pin	Secures seal locator pin (details 321, 408, and 465) in locating position.
321	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location.
332, 334	Lower fairing support locator	Provides Z plane location at Y363.650.
339	Handknob	Secures forward, center, and aft bank assemblies to fixture base (detail 192, 193).
347, 372	Locator block	Provides mold line reference and clamping ability at Y342.076 left side and Y341.328 right side.
375, 376	Locator block	Provides mold line reference and clamping ability at Y323.585.
380, 381	Forward bank assembly	Contains various locators for positioning and clamping intercostals.
386, 387	Locator block	Provides mold line reference and clamping ability at Y266.493.
388, 389	Locator block	Provides mold line reference and clamping ability at Y315.586.
395, 396	Locator block	Provides mold line reference and clamping ability at Y283.520.
399	Locator block	Provides Y plane location for Y283.520 intercostal.
401, 402	Locator block	Provides mold line reference and clamping ability at Y303.326.
403, 404	Locator block	Provides mold line reference and clamping ability at Y295.840.
408	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y283.488.
441, 442	Locator block	Provides mold line reference and clamping ability at Y259.900.
450, 491	Locator block	Provides Y plane location for Y342.076 intercostal on left side and Y341.328 intercostal on right side.
465	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y266.565, Y287.073, Y295.840, Y303.326, Y308.073, Y315.586, Y323.585, Y331.084, Y341.328, Y342.076, and Y350.452.
487, 488	Locator block	Provides Y plane location for Y350.452 intercostal.
489, 490	Locator block	Provides Y plane location for Y331.084 intercostal.

Figure 10. Replacement - Lower Fairing Support (Sheet 8)

DETAIL NO.	NAME	FUNCTION
496	Locator block	Provides Y plane location for Y363.650 intercostal.
497	Locator block	Provides Y plane location for Y323.585 intercostal.
499, 500	Locator block	Provides Y plane location for Y308.073 intercostal.
501	Locator block	Provides Y plane location for Y315.586 intercostal.
502	Aft bank assembly	Contains various locators for positioning and clamping intercostals.
503	Locator block	Provides Y plane location for Y303.326 intercostal.
504	Center bank assembly	Contains various locators for positioning and clamping intercostals.
505	Locator block	Provides Y plane location for Y295.840 intercostal.
506	Locator block	Provides Y plane location for Y287.073 intercostal.
521	Roll pin	Used as a directional indicator to determine position of locator pin (details 321, 408, and 465).
537, 538	Locator block	Provides mold line reference and clamping ability at Y363.650.
539, 540	Locator block	Provides mold line reference and clamping ability at Y350.452.
541, 542	Locator block	Provides mold line reference and clamping ability at Y331.084.
543, 544	Locator block	Provides mold line reference and clamping ability at Y308.073.
545, 546	Locator block	Provides mold line reference and clamping ability at Y287.073.
550	L-pin	Locates forward, center, and aft bank assemblies to fixture base (detail 192, 193).

Figure 10. Replacement - Lower Fairing Support (Sheet 9)

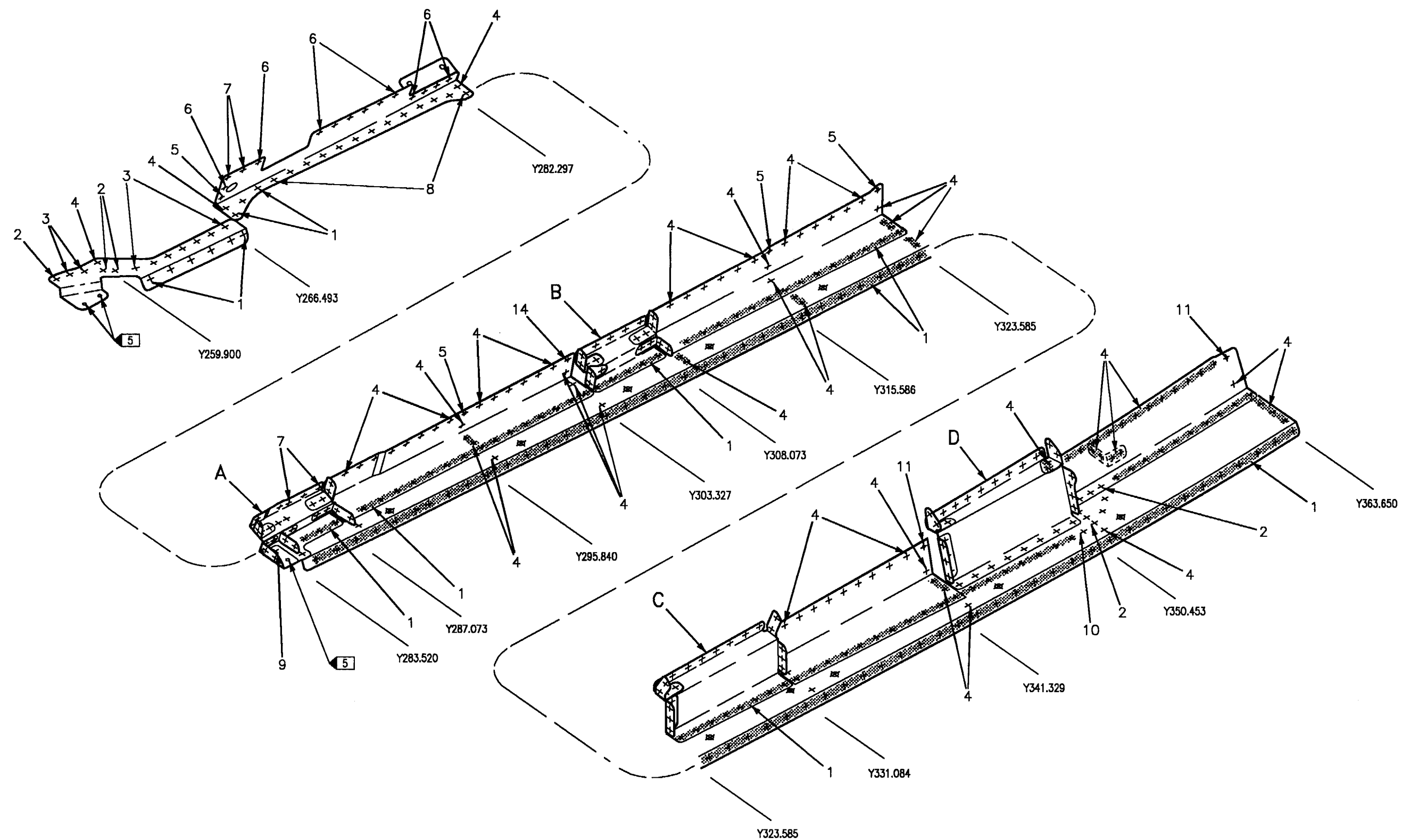


Figure 11. Figure 11. Lower Fairing Support, 74A350823, Fastener Index (Sheet 1) Figure 11.

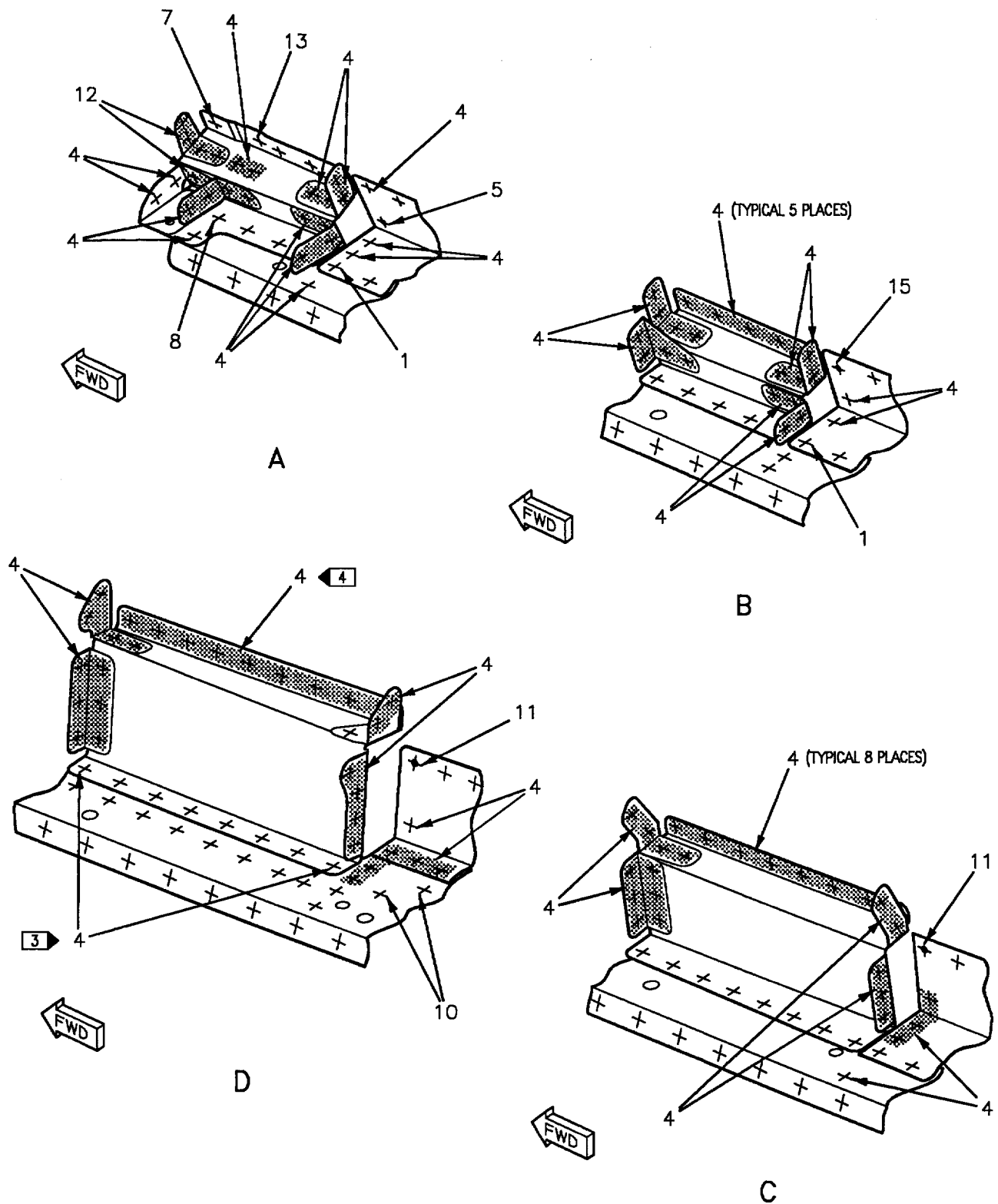


Figure 11. Lower Fairing Support, 74A350823, Fastener Index (Sheet 2)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 2	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1			0.161 +0.005 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	MS20426AD5			
2			0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1399D5A3			
3			0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1399D5A4			
4			0.161 +0.005 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	MS20470AD5			
5			0.1635 +0.0025 -0.0000	T.F.I.M.25.0201066 0.1470 DRILL T.F.I.M.25.1161637 0.1637 REAMER	ST3M761V08-3 PIN			ST3M526C08M COLLAR
6			0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1398D5A2			
7			0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1398D5A6			
8			0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1399C5A3			
9			0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1399C5A4			
10			0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1399D5A2			
11			0.1635 +0.0025 -0.0000	T.F.I.M.25.0201066 0.1470 DRILL T.F.I.M.25.1161637 0.1637 REAMER	ST3M761V08-4 PIN			ST3M526C08M COLLAR
12			0.128 +0.006 -0.000	T.F.I.M.25.0201056 0.1285 DRILL	MS20470AD4			
13			0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1398D5A7			
14			0.1635 +0.0025 -0.0000	T.F.I.M.25.0201066 0.1470 DRILL T.F.I.M.25.1161637 0.1637 REAMER	ST3M761V08-7 PIN	ST3M68308 WASHER		ST3M573C08 COLLAR
15			0.1635 +0.0025 -0.0000	T.F.I.M.25.0201066 0.1470 DRILL T.F.I.M.25.1161637 0.1637 REAMER	ST3M761V08-8 PIN	ST3M68308 WASHER		ST3M573C08 COLLAR

Figure 11. Lower Fairing Support, 74A350823, Fastener Index (Sheet 3)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 2	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
LEGEND								
1								For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07).
2								Part of 74D110325-1001 aircraft structure repair tool kit (A1-F18AC-SRM-200, WP004 16).
3								Rivet installed 8 places on left side and 9 places on right side.
4								Rivet installed 9 places on left side and 10 places on right side.
5								Hole diameter is 0.195 +0.007 -0.000 inch diameter.

Figure 11. Lower Fairing Support, 74A350823, Fastener Index (Sheet 4)

13. **AFT ROCKET MOTOR SUPPORT, 74A350861, REPLACEMENT.** See figure 12.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, F/A-18B Canopy	RE174350006-1
Aircraft Structure Repair Tool Kit	74D110325-1001

Materials Required

Nomenclature	Specification or Part Number
Barrier Material	MIL-B- 131, CLASS 1
Cheesecloth	CCC-C-440, Type 1, Class 1
Cushioning Material Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108
Isopropyl Alcohol	TT-I-735
Sealing Compound	MIL-S-83430, Class A-1/2
Shim	74A350866-2003 5052-H39 Alum Lam 0.048 x 1.10 x 3.25
Shim (2 Required)	74A350866-2005 5052-H39 Alum Lam 0.048 x 1.06 x 1.95



To prevent damage to transparency, be sure barrier material is installed between transparency and ethyl foam. See canopy preparation (WP006 01).

- a. Load canopy into fixture (WP006 01).
- b. Remove 74A350800 forward transparency (WP006 03).
- c. Remove 74A350865 cover, door 85 (A1-F18AC-LMM-010).
- d. Remove canopy jettison rocket motor (A1-F18AC-120-300, WP067 00).

- e. Remove four ST3M748AD4 rivets securing 74A350824 fairing angle to 74A350814 side frame.

NOTE

Two sections of 74A350826 channel and the 74A350860 cross beam support must be removed for access when back drilling holes in 74A350861 support.

- f. Remove two sections of 74A350826 channel from Y274.000 thru Y287.153. See figure 9 for fastener location.

NOTE

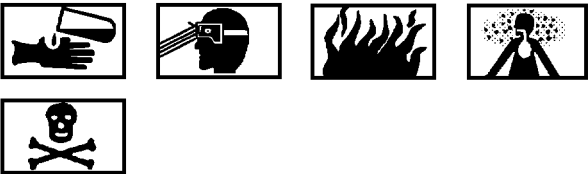
When removing 74A350860 cross beam support, keep 74A350866 shims or note shim thickness for use in installation.

- g. Remove 74A350860 cross beam support.

NOTE

Fasteners used to attach 74A350860 cross beam support are also used to attach 74A350861 support.

- h. Remove 74A350861 support and 74A350866 shims from mating structure.



Isopropyl Alcohol

2

- i. Clean all residual sealant from area where 74A350861 support and 74A350866 shims were removed using plastic scraper and cheesecloth moistened with isopropyl alcohol.

- j. Locate forward bank assembly (detail 380, 381) on fixture base (detail 192, 193) using L-pin (detail 550) two places and secure by installing handknobs (detail 339) three places. See detail A.

- k. Remove locator block assembly (details 390, 392, 395, 396, 399, 418, or 419) from forward bank assembly (detail 380, 381) by removing L-pins (detail 425) two places and handknob (detail 423). See detail A.

NOTE

Support block (detail 411, 412) is factory installed on mounting angle (detail 413). Mounting angle (detail 413) is factory installed on locator block (detail 393, 394).

l. Insert swivel pin (detail 88, 89) into slotted bushing (detail 414) located in support block (detail 411, 412). See details B and C.

m. Rotate swivel pin (detail 88, 89) into locating position and secure by tightening lock screw (detail 440). See detail C.

n. Install locator block (detail 393, 394) on mounting angle (detail 420, 421). See detail A.

o. Position locator block assembly (detail 393, 394) on forward bank assembly (detail 380, 381) using L-pins (detail 425) two places and handknob (detail 423). See detail A.

p. Raise locator pin (details 321, 408, and 465) inside seal retainers and rotate 90° so roll pin (detail 521) points forward or aft. See detail D.

q. Secure locator pin (details 321, 408, and 465) by inserting L-pin (detail 207). See detail D.

r. Slide lower fairing support locators (detail 332, 334) upward and secure in position with L-pin (detail 176). See detail E.

s. Locate new 74A350861 support in X, Y, and Z plane by inserting 0.255 inch diameter hole in support over swivel pin (detail 88, 89). See detail B.

t. Install 74A350866 shims. Make sure 74A350861 support flanges are not against shims and 74A350814 side frame. See detail F for shim identification and location.

u. Secure 74A350861 support and 74A350866 shims to 74A350814 side frame by installing C-clamp.



Use care when back drilling not to elongate holes in 74A350814 side frame.

v. Back drill holes in new 74A350861 support and 74A350866 shims using existing holes in 74A350814 side frame as guide. See figure 13 for fastener location and drilling information.

w. Remove C-clamp, 74A350861 support, 74A350866 shims, and forward bank assembly (detail 380, 381), Detail F. See figure 12.

x. Apply finish system, as required, to new 74A350861 support, 74A350866 shims, and any other area requiring finish system touch up (A1-F18AC-SRM-500, WP021 00).



Sealing Compound

7

y. Fay surface seal interfacing surfaces on 74A350861 support, 74A350866 shims, 74A350860 cross beam support, and 74A350814 side frame. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

z. Locate hole diameters in 74A350861 support, 74A350866 shims, and 74A350860 cross beam support inline with hole diameters in 74A350814 side frame.

aa. Wet install fasteners securing 74A350861 support and 74A350866 shims to 74A350814 side frame and 74A350860 cross beam support. For fastener sealing (A1-F18AC-SRM-200, WP011 00). See figure 13 for fastener information.

ab. Install 74A350824 fairing angle:

(1) Fay surface seal interfacing surfaces on fairing angle and 74A350814 side frame. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

(2) Wet install four ST3M784AD4 tack rivets. For fastener sealing (A1-F18AC-SRM-200, WP011 00).

ac. Install the two sections of 74A350826 channel. See paragraph 9, this WP.

ad. Reinstall canopy jettison rocket motor (A1-F18AC-120-300, WP067 00).

ae. Reinstall 74A350865 cover, door 85 (A1-F18AC-LMM-010).

af. Reinstall 74A350800 forward transparency (WP006 03).

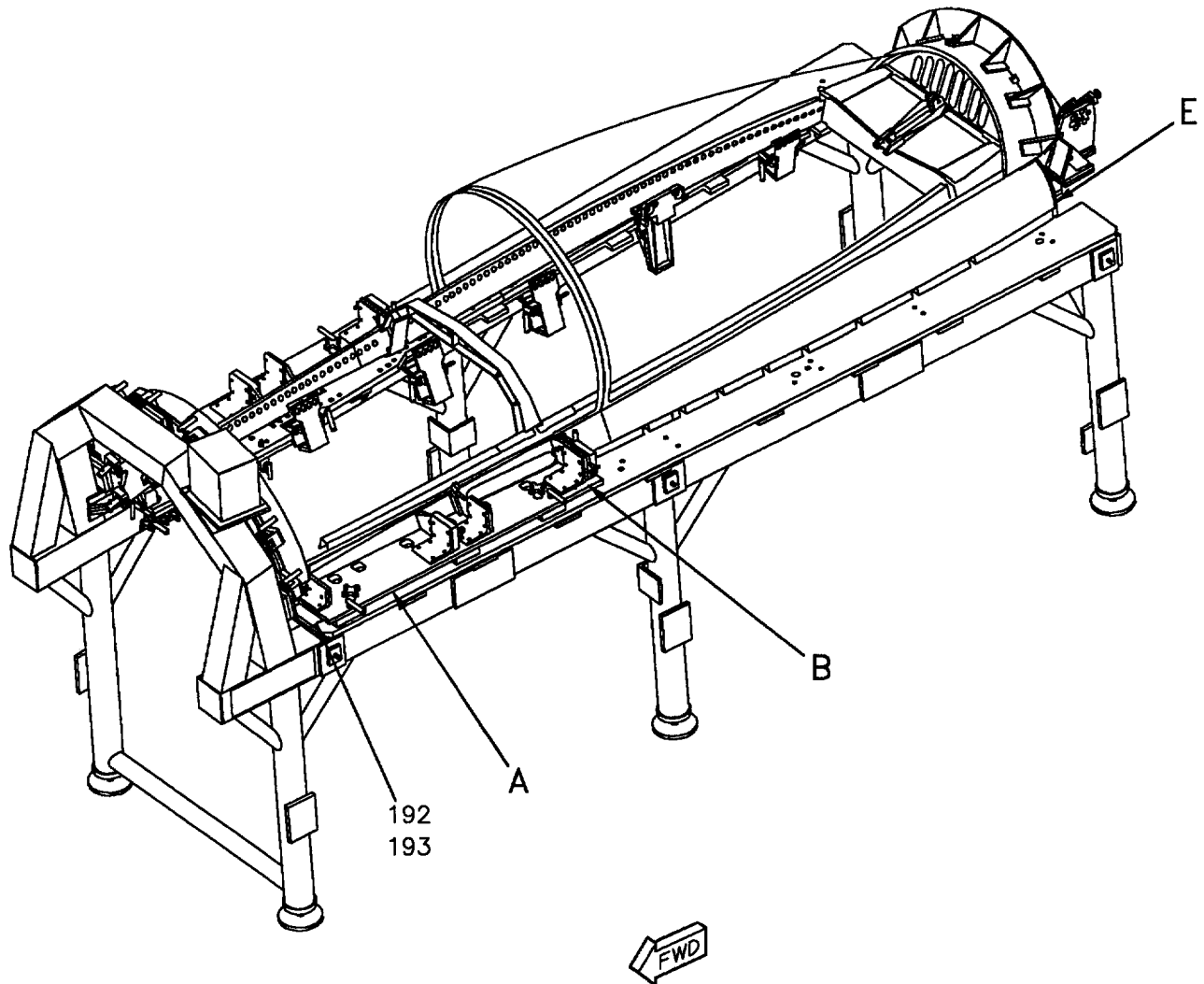
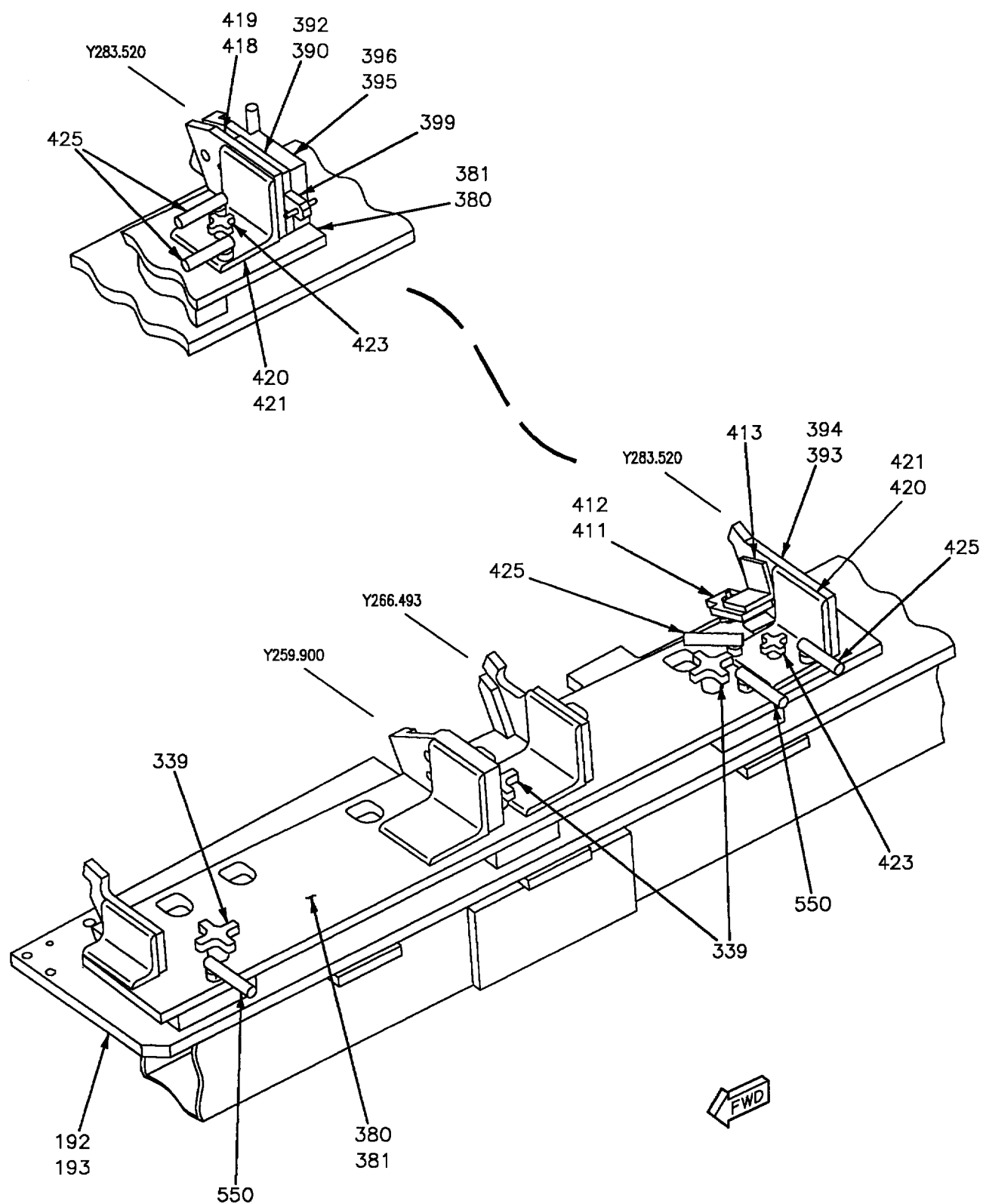


Figure 12. Replacement - Aft Rocket Motor Support (Sheet 1)



A

Figure 12. Replacement - Aft Rocket Motor Support (Sheet 2)

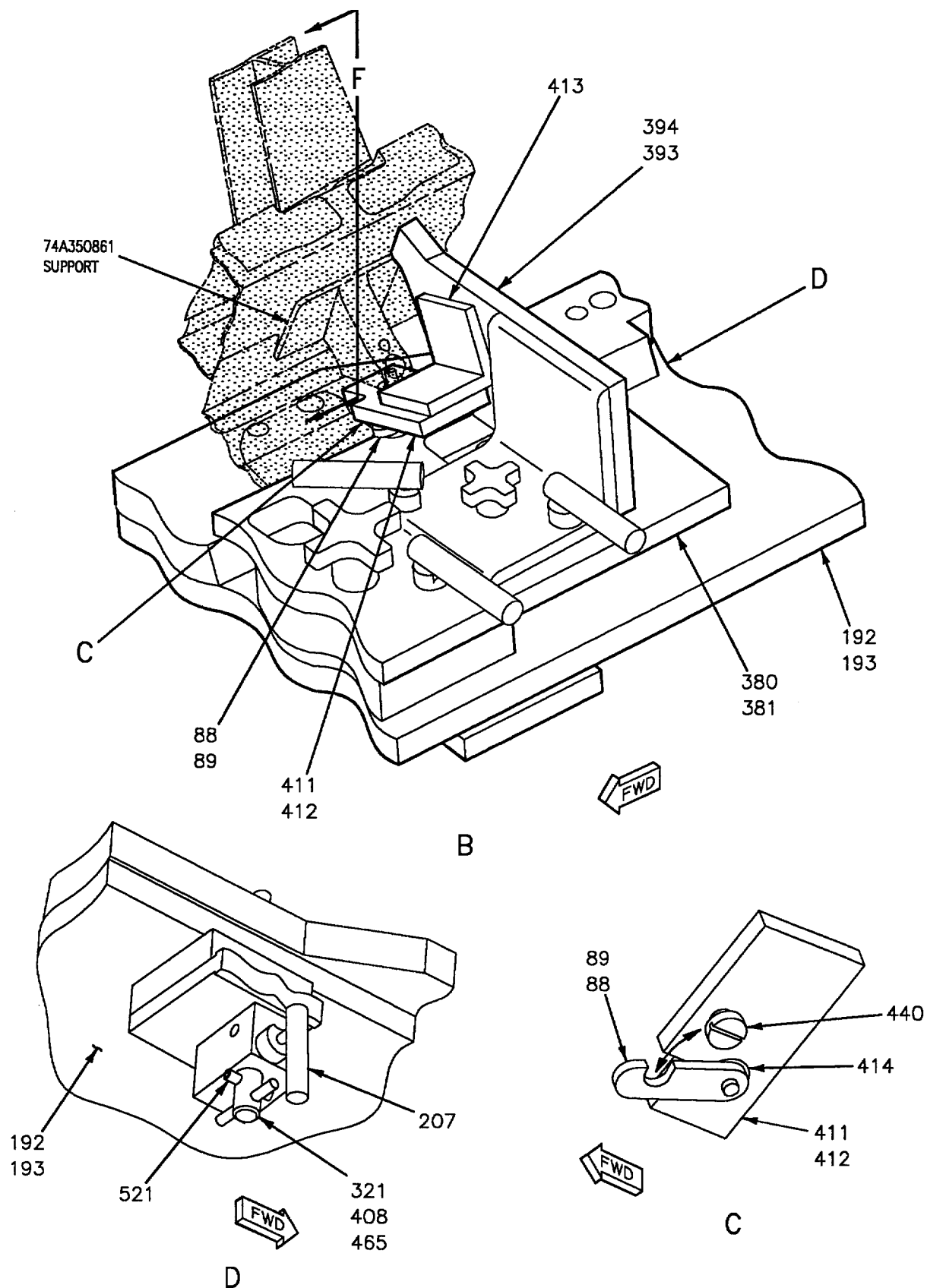


Figure 12. Replacement - Aft Rocket Motor Support (Sheet 3)

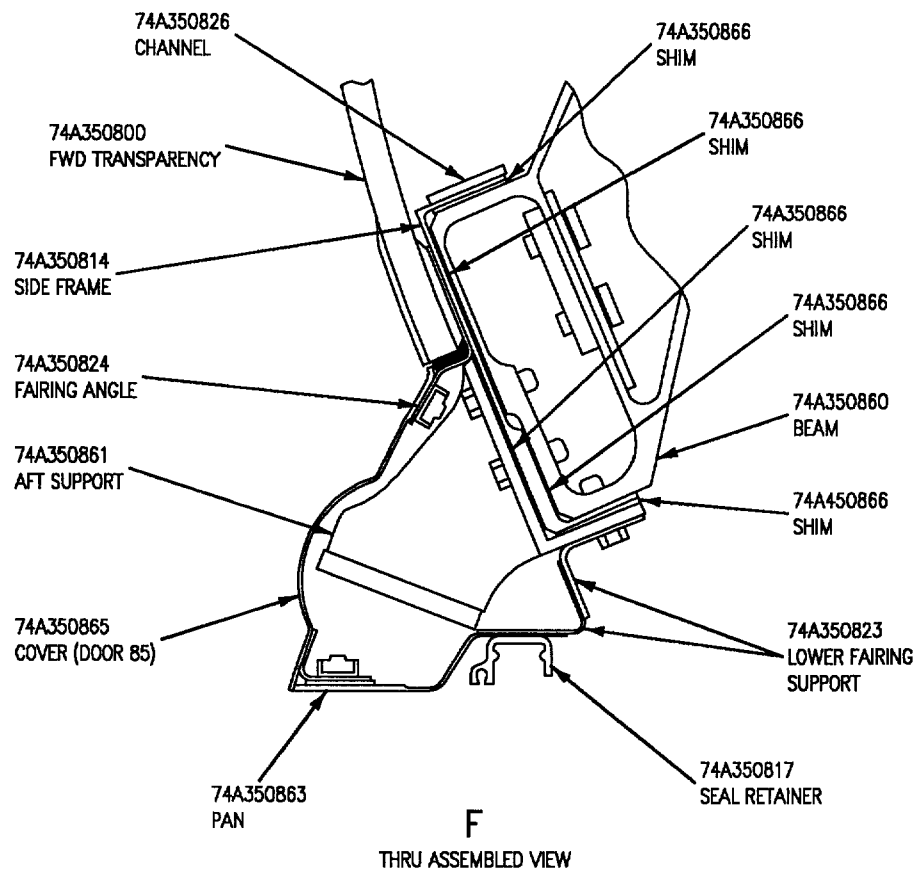
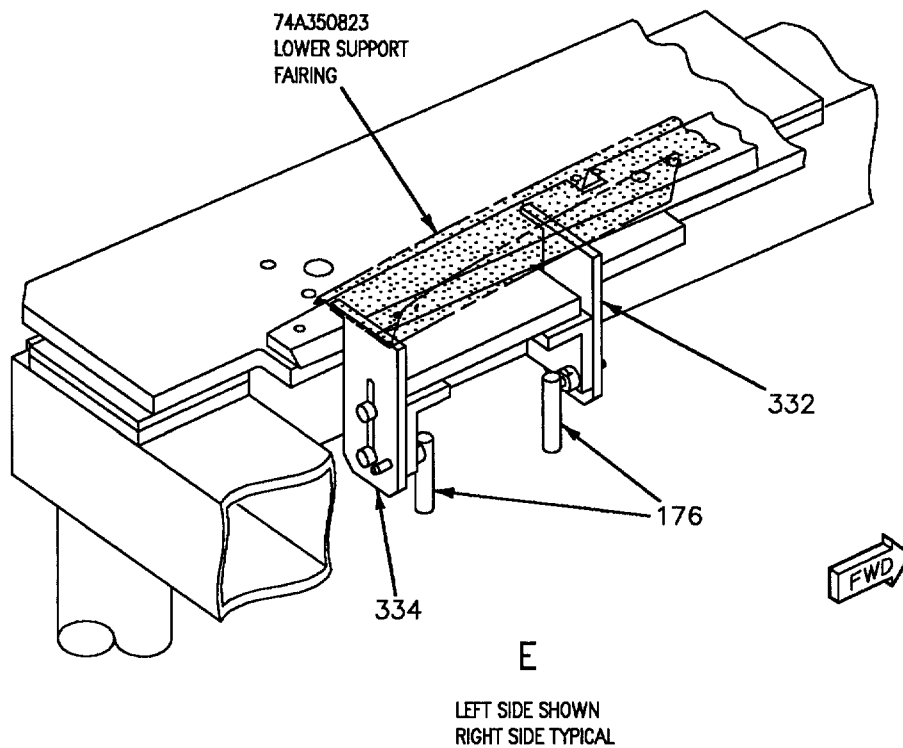


Figure 12. Replacement - Aft Rocket Motor Support (Sheet 4)

DETAIL NO.	NAME	FUNCTION
88, 89	Swivel pin	Locates 74A350861 support in X, Y, and Z plane.
176	L-pin	Locates locator blocks in correct X, Y, and Z plane.
192, 193	Fixture base	Base of fixture to which most locators mount.
207	L-pin	Secures seal locator pin (details 321, 408, and 465) in locating position.
321	Locator pin	Locates seal retainer and positions canopy in X and Z plane location.
332, 334	Lower fairing support locator	Provides Z plane location at Y363.650.
339	Handknob	Secures forward, center, and aft bank assemblies to fixture base (detail 192, 193).
380, 381	Forward bank assembly	Contains various locators for positioning and clamping structural components.
390, 392	Locator block assembly	Used as spacer between locator block (details 395, 396 and 418, 419).
393, 394	Locator block	Provides mounting capability when installing mounting angle (detail 413) and support block (detail 411, 412).
395, 396	Locator block assembly	Provides mold line reference and clamping ability at Y283.520.
399	Locator block assembly	Provides Y plane location for Y283.520 intercostal.
408	Locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y283.488.
411, 412	Support block	Provides mounting capability for swivel pin (detail 88, 89).
413	Mounting angle	Provides mounting capability for support block (detail 411, 412).
414	Slotted bushing	Supports swivel pin (detail 88, 89).
418, 419	Locator block assembly	Provides mold line reference and clamping ability at Y283.000.
420, 421	Mounting angle	Provides mounting capability for locator block (detail 393, 394).
423	Handknob	Secures locator block assembly (detail 393, 394) on forward bank assembly (detail 380, 381).

Figure 12. Replacement - Aft Rocket Motor Support (Sheet 5)

DETAIL NO.	NAME	FUNCTION
425	L-pin	Locates locator block assembly (detail 393, 394) on forward bank assembly (detail 380, 381).
440	Lock screw	Secures swivel pin (detail 88, 89) in locating position.
465	Locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y266.565, Y287.073, Y295.840, Y303.326, Y308.073, Y315.586, Y323.585, Y331.084, Y341.328, Y342.076, and Y350.452.
521	Roll pin	Used as a directional indicator to determine position of locator pin (details 321, 408, and 465).
550	L-pin	Locates forward bank assembly (detail 380, 381) to fixture base (detail 192, 193).

Figure 12. Replacement - Aft Rocket Motor Support (Sheet 6)

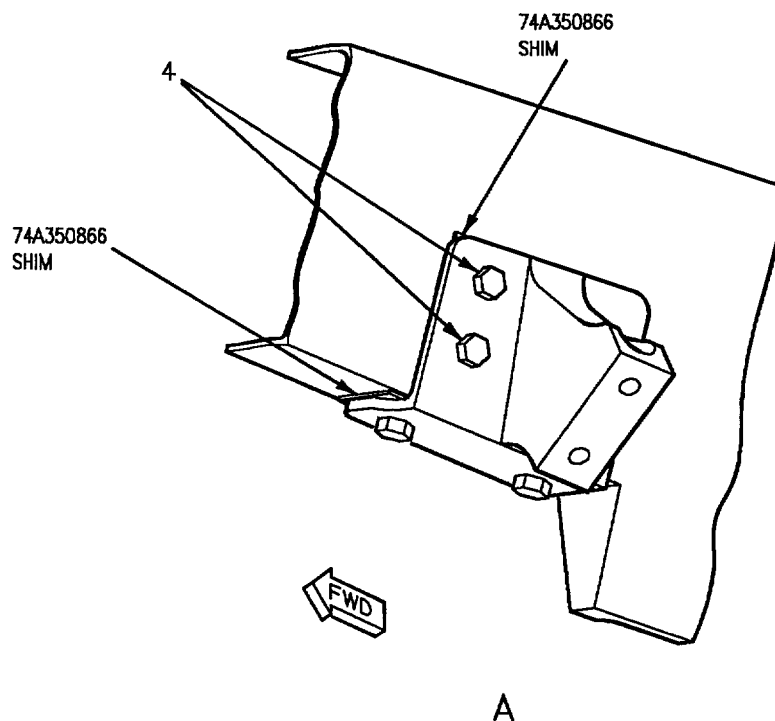
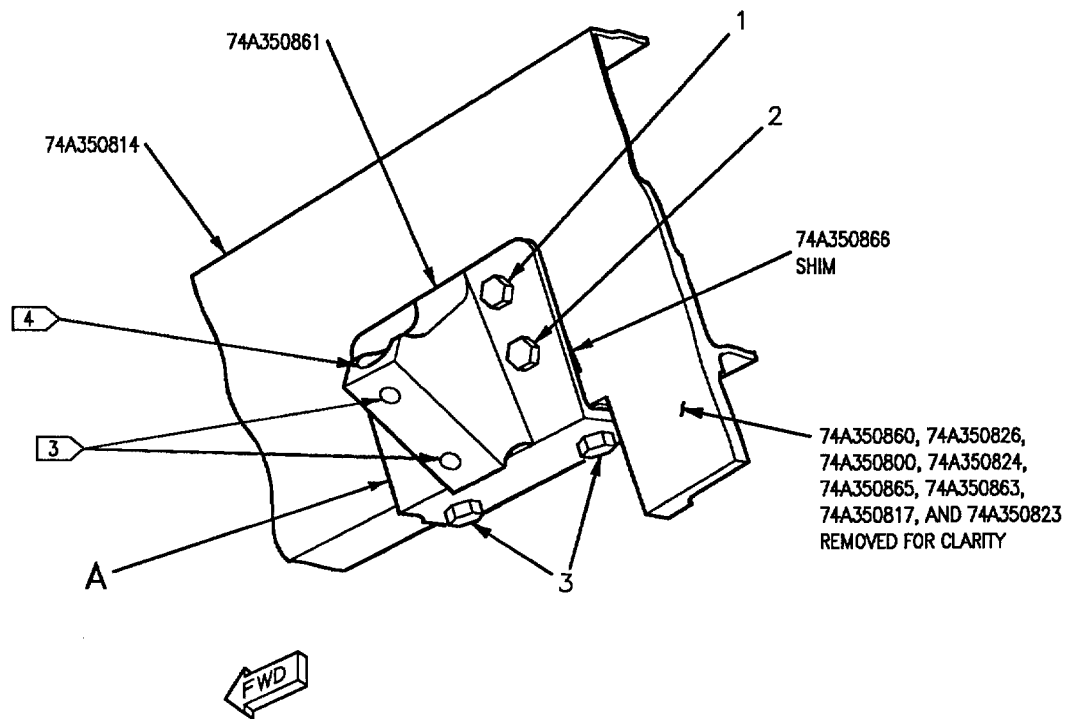


Figure 13. Aft Rocket Motor Support, 74A350861, Fastener Index (Sheet 1)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 2	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1			0.260 +0.003 -0.000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0204154 0.2460 DRILL T.F.I.M.25.1172602 0.2602 REAMER	NAS16714L9			
2			0.260 +0.003 -0.000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0204154 0.2460 DRILL T.F.I.M.25.1172602 0.2602 REAMER	NAS16714L10			
3			0.260 +0.003 -0.000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0204154 0.2460 DRILL T.F.I.M.25.1172602 0.2602 REAMER	NAS16714L8			
4			0.260 +0.003 -0.000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0204154 0.2460 DRILL T.F.I.M.25.1172602 0.2602 REAMER	NAS16714L7			
<p align="center">LEGEND</p> <p>1 For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07).</p> <p>2 Part of 74D110325-1001 aircraft structure repair tool kit (A1-F18AC-SRM-200, WP004 16).</p> <p>3 Hole diameter is 0.255 +0.007 -0.000.</p> <p>4 Hole diameter is 0.531 +0.002 -0.001.</p>								

Figure 13. Aft Rocket Motor Support, 74A350861, Fastener Index (Sheet 2)

14. **FORWARD ROCKET MOTOR SUPPORT, 74A350862, REPLACEMENT.** See figure 14.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, F/A-18B Canopy	RE174350006-1

Materials Required

Nomenclature	Specification or Part Number
Barrier Material	MIL-B-131, Class 1
Cheesecloth	CCC-C-440, Type 1, Class 1
Isopropyl Alcohol	TT-I-735
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108
Sealing Compound	MIL-S-83430, Class A-1/2
Shim	74A350866-2007 5052-H39 Alum Lam 0.048 x 0.86 x 2.26
Shim	74A350866-2009 5052-H39 Alum Lam 0.048 x 0.86 x 2.80



To prevent damage to transparency, be sure barrier material is installed between transparency and ethyl foam. See canopy preparation (WP006 01).

- a. Load canopy into fixture (WP006 01).
- b. Remove 74A350800 forward transparency (WP006 03).
- c. Remove 74A350865 cover, door 85 (A1-F18AC-LMM-010).
- d. Remove canopy jettison rocket motor (A1-F18AC-120-300, WP067 00).

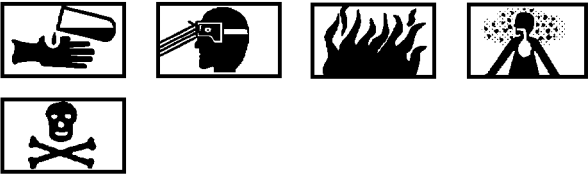
- e. Remove four ST3M748AD4 rivets securing 74A350824 fairing angle to 74A350814 side frame.

NOTE

The forward section of 74A350826 channel angles must be removed for access when back drilling holes in 74A350862 forward support.

- f. Remove fasteners securing forward section of 74A350826 channel angles from Y244.941 thru Y278.420. See figure 9 for fastener location.

- g. Remove fasteners securing 74A350862 forward support and 74A350866 shims to mating structure. See figure 14 for fastener location.



Isopropyl Alcohol 2

- h. Clean all residual sealant from area where 74A350862 support and 74A350866 shims were removed using plastic scraper and cheesecloth moistened with isopropyl alcohol.

- i. Position new 74A350862 support flanges net against 74A350866 shims and 74A350814 side frame. See detail A for shim identification and location.

- j. Secure 74A350862 support and 74A350866 shims to 74A350814 side frame using C-clamp.



Use care when back drilling not to elongate holes in 74A350814 side frame.

- k. Back drill holes in new 74A350862 support and 74A350866 shims using existing holes in 74A350814 side frame as guide. See figure 14 for fastener location and drilling information.

- l. Remove C-clamp, 74A350862 support, and 74A350866 shims from 74A350814 side frame.

- m. Apply finish system as required to new 74A350862 support, 74A350866 shims, and any other area requiring finish system touchup (A1-F18AC-SRM-500, WP021 00).

NOTE

Bottom flange of 74A350862 support is installed over 74A350826 lower channel angle. Install lower channel angle before installing support.

n. Reinstall 74A350826 forward lower channel angle. See paragraph 9, this WP.



Sealing Compound

7

o. Fay surface seal interfacing surfaces on 74A350862 support, 74A350866 shims, and 74A350814 side frame. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

p. Locate hole diameters in 74A350862 support and 74A350866 shims inline with hole diameters in 74A350814 side frame.

q. Wet install fasteners securing 74A350862 support and 74A350866 shims to 74A350814 side frame. For fastener sealing (A1-F18AC-SRM-200, WP011 00). See figure 14 for fastener information.

r. Install 74A350824 fairing angle:

(1) Fay surface seal interfacing surfaces on fairing angle and 74A350814 side frame. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

(2) Wet install four ST3M784AD4 tack rivets. For fastener sealing (A1-F18AC-SRM-200, WP011 00).

s. Reinstall canopy jettison rocket motor (A1-F18AC-120-300, WP067 00).

t. Reinstall 74A350865 cover, door 85 (A1-F18AC-LMM-010).

u. Reinstall 74A350800 forward transparency (WP006 03).

v. Reinstall 74A350826 forward upper channel angle. See paragraph 9, this WP.

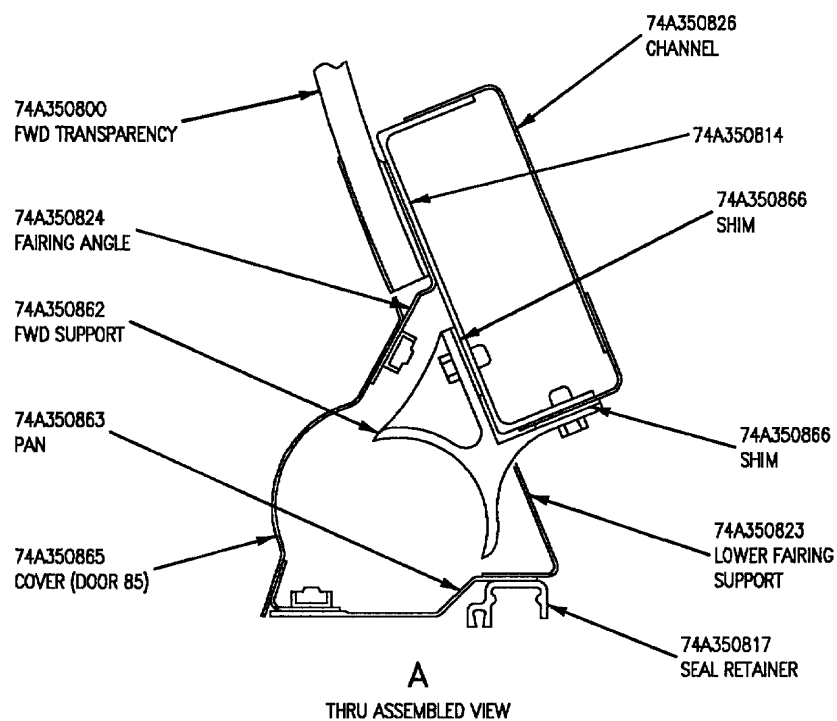
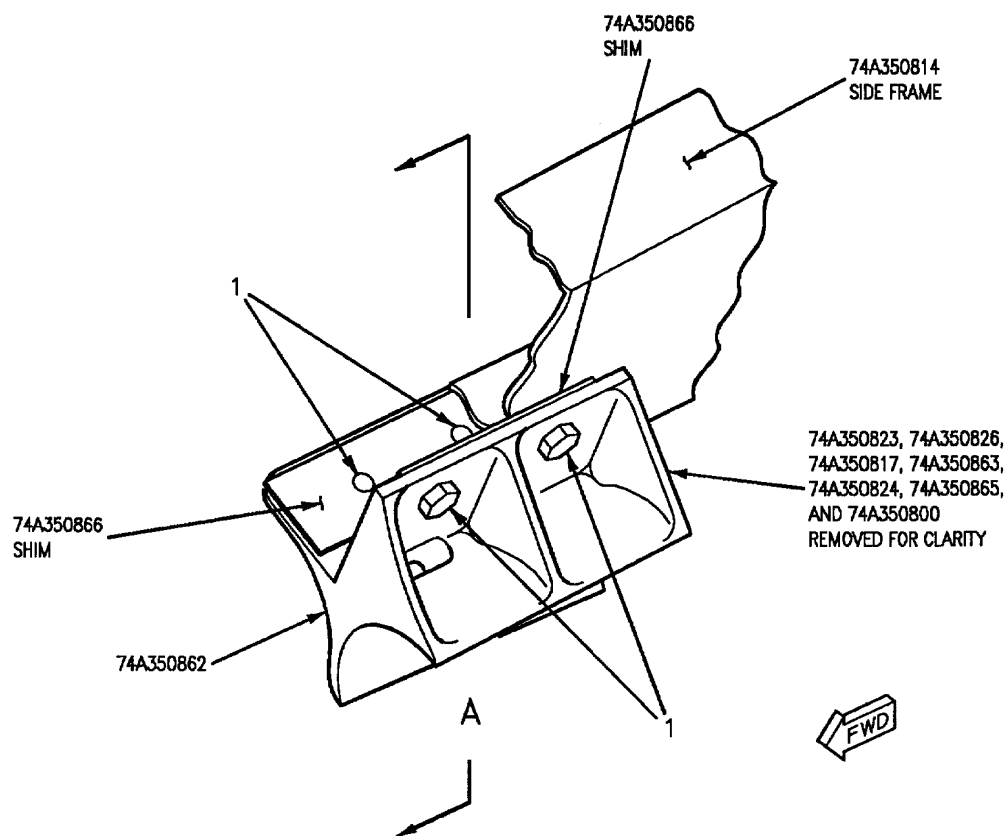


Figure 14. Forward Rocket Motor Support, 74A350862, Fastener Index (Sheet 1)





INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 	FASTENER 	WASHER	SPACER BUSHING	RETAINER
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<p style="text-align: center;">LEGEND</p> <p> For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07).</p> <p> Part of 74D110325-1001 aircraft structure repair tool kit (A1-F18AC-SRM-200, WP004 16).</p>								

Figure 14. Forward Rocket Motor Support, 74A350862, Fastener Index (Sheet 2)

15. **ROCKET MOTOR PAN, 74A350863, REPLACEMENT.** See figure 15.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, F/A-18B Canopy	RE174350006-1

Materials Required

Nomenclature	Specification or Part Number
Barrier Material	MIL-B- 131, Class 1
Cheesecloth	CCC-C-440, Type 1, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108
Isopropyl Alcohol	TT-I-735
Sealing Compound	MIL-S-83430, Class A-1/2
Tape, Pressure Sensitive	A-A-883, Type 1, 1 inch



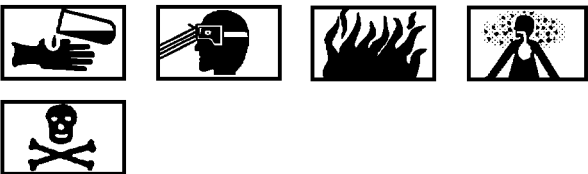
To prevent damage to transparency, be sure barrier material is installed between transparency and ethyl foam. See canopy preparation (WP006 01).

- a. Load canopy into fixture (WP006 01).
- b. Remove 74A350865 cover, door 85 (A1-F18AC-LMM-010).
- c. Remove canopy jettison rocket motor (A1-F18AC-120-300, WP067 00).
- d. Remove fasteners securing 74A350864 seal retainer to 74A350863 pan and mating structure. See detail A for part location.
- e. Remove fasteners securing 74A350864 seal retainer to 74A350863 pan and mating structure. See detail A for part location.

f. Remove fasteners securing 74A350817 seal retainer to 74A350863 pan and mating structure. See detail A for part location.

g. Remove fasteners securing 74A350863 pan to 74A350841 intercostals. See detail A for part location. See figure 16 for fastener location.

h. Remove 74A350863 pan.



Isopropyl Alcohol 2

i. Clean all residual sealant from area where 74A350863 pan and 74A350817 and 74A350864 seal retainers were removed using plastic scraper and cheesecloth moistened with isopropyl alcohol.

j. Slide lower fairing support locators (detail 332, 334) upward and secure in position with L-pin (detail 176). See detail B.

k. Position 74A350817 seal retainer over locator pin (detail 408). See detail C.

l. Position 74A350864 seal retainers over locator pin (detail 465). See detail D.

m. Raise locator pin (details 321, 408, and 465) inside seal retainers and rotate 90° until roll pin (detail 521) points forward or aft. See detail C and D.

n. Secure locator pin (details 321, 408, and 465) by inserting L-pin (detail 207). See detail C and D.

o. Position 74A350863 pan in Z plane location by sliding inboard flange of pan between lower surface of 74A350823 lower fairing support and upper surface of 74A350817 and 74A350864 seal retainers. See details A, C, and D.

p. Position 74A350863 pan in Y plane location:

(1) Locate forward edge of pan net with forward edge of 74A350823 lower fairing support at Y266.490. See detail A.

(2) Locate aft edge of pan net with aft edge of 74A350823 lower fairing support clip at Y283.520. See detail A.

q. Position 74A350863 pan in X plane location:

(1) Install 74A350865 cover with enough temporary fasteners installed in 74A350824 angle and 74A350841 intercostal to hold in correct position.

(2) Locate outboard edge of pan net with inner surface of 74A350865 cover.

(3) Carefully remove temporary fasteners and 74A350865 cover.

r. Secure 74A350863 pan in position using C-clamps.



Use care when back drilling not to elongate holes in 74A350817, 74A350864, 74A350841, and 74A350823.

s. Back drill holes in 74A350863 pan using existing holes in 74A350823, 74A350864, 74A350817, and 74A350841 as guide. See figure 16 for hole diameter and drilling information.

t. Install temporary fasteners to hold 74A350863 pan in correct position.

u. Remove C-clamps.

v. Locate 74A350865 cover in position and secure to 74A350863 pan using pressure sensitive tape.

w. Remove 74A350865 cover and 74A350863 pan as an assembly.

x. Locate and drill holes in 74A350863 pan using existing holes in 74A350865 angle as guide. See figure 16 for hole diameters and drilling information.

y. Countersink holes in bottom surface of 74A350863 pan to flushness requirement of fastener. See figure 16 for hole location.

NOTE

If 74A350868 shield and plate are not damaged, salvage from existing pan and go to step aa. If new shield and plate are required to be installed, do step below.

z. Transfer hole pattern from existing 74A350868 shield and plate to new parts; or, dimensionally locate hole pattern per 74A350863 engineering drawing. See figure 16 for hole diameter and drilling information.

aa. Locate 74A350868 shield and plate on 74A350863 pan using dimensions shown on figure 16.

ab. Back drill holes in 74A350863 pan using existing holes in 74A350868 shield and plate as guide. See figure 16 for hole diameter and drilling information.

NOTE

If new 74A350868 plate is being installed, do step below.

ac. Back drill 0.195 inch diameter hole in plate using existing hole in 74A350863 pan as guide. See figure 16 for hole location.

ad. Double countersink holes to flushness requirement of fastener. See figure 16 for hole location.

ae. Remove C-clamps.

af. Apply finish system to 74A350863 pan, 74A350868 shield, and plate. Apply finish system to any other area requiring finish system touchup (A1-F18AC-SRM-500, WP021 00).

ag. Install plate nut on 74A350863 pan. See figure 16 for hole location.



Sealing Compound

7

ah. Fay surface seal interfacing surfaces on 74A350863 pan, 74A350868 shield, and plate. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

ai. Wet install fasteners securing 74A350868 shield and plate to 74A350863 pan. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 16.

aj. Fay surface seal interfacing surfaces on 74A350863 pan, 74A350841 intercostal, 74A350823 lower fairing support, and 74A350817 and 74A350864 seal retainers. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

ak. Wet install fasteners securing 74A350863 pan to mating structure. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 16.

al. Apply fillet seal to all peripheral joints on pressure side of canopy. Fill all voids and joggles on pressure side which cannot be fay or fillet sealed (A1-F18AC-SRM-200, WP011 00).

am. Reinstall canopy jettison rocket motor (A1-F18AC-120-300, WP067 00).

an. Reinstall 74A350865 cover, door 85 (A1-F18AC-LMM-010).

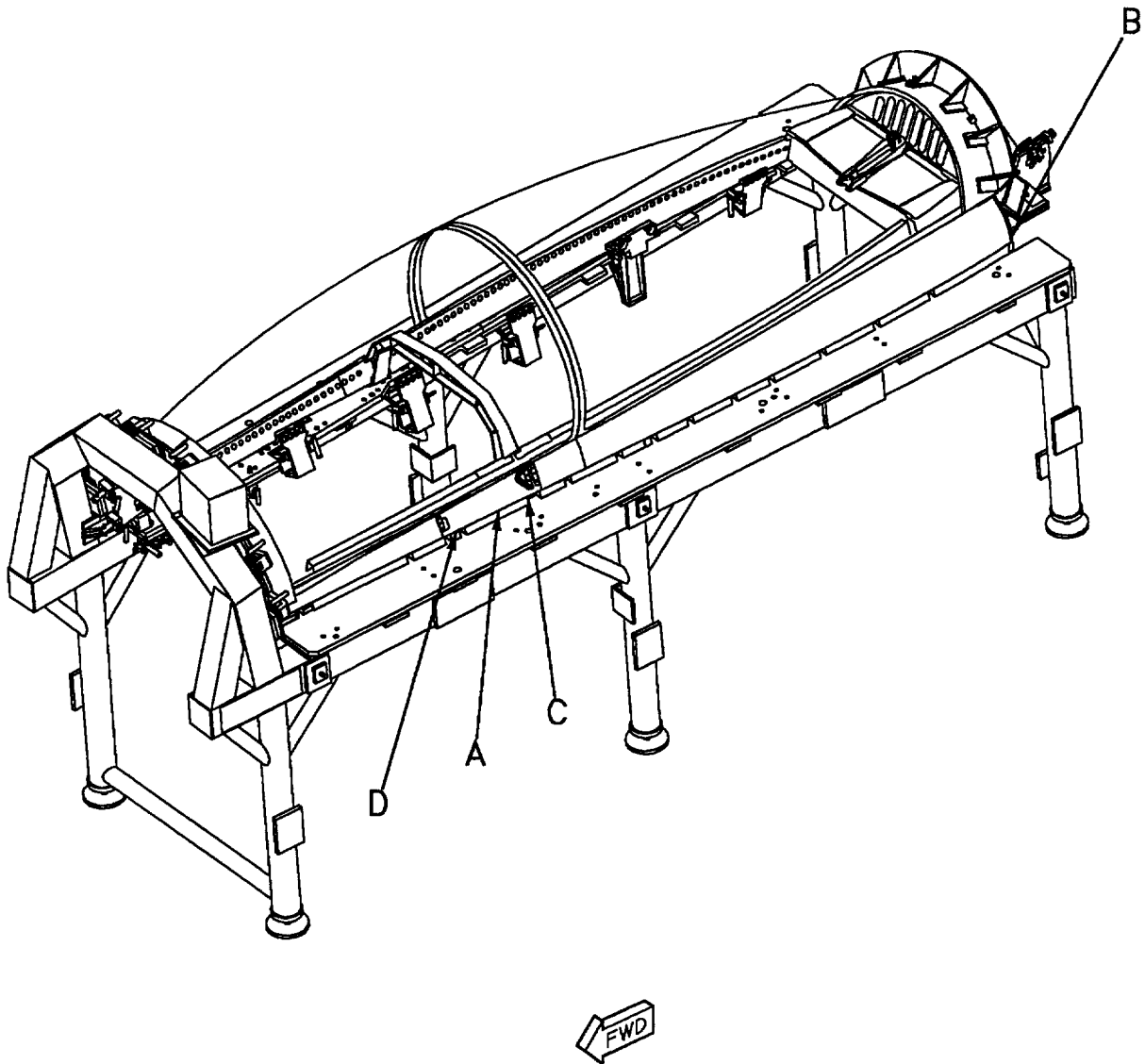
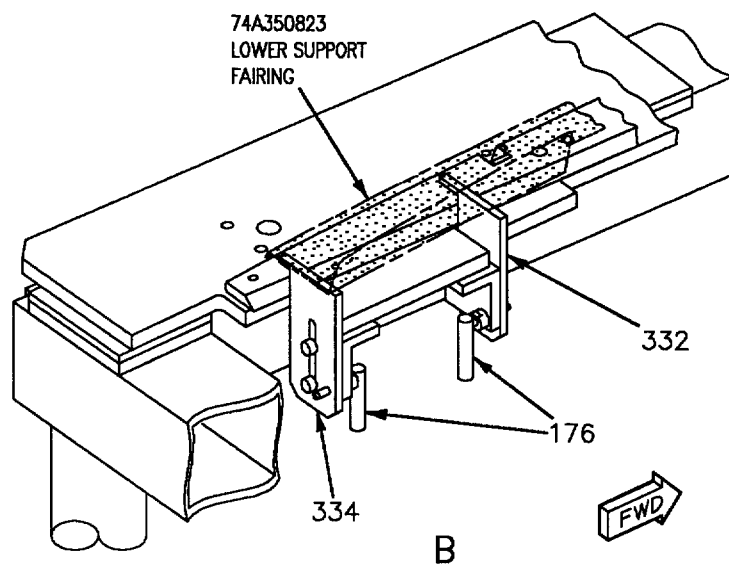
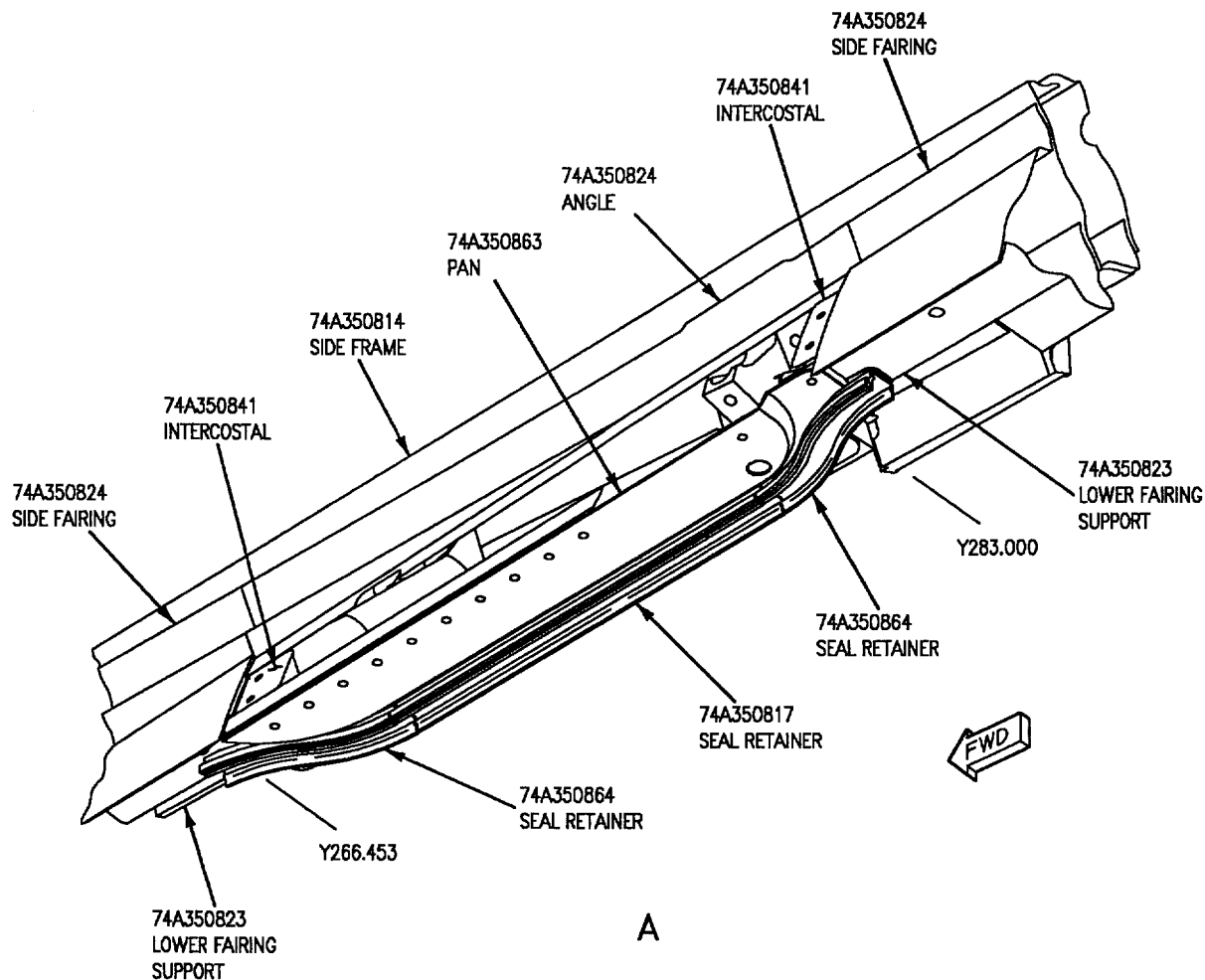


Figure 15. Replacement - Rocket Motor Pan (Sheet 1)



LEFT SIDE SHOWN
RIGHT SIDE TYPICAL

Figure 15. Replacement - Rocket Motor Pan (Sheet 2)

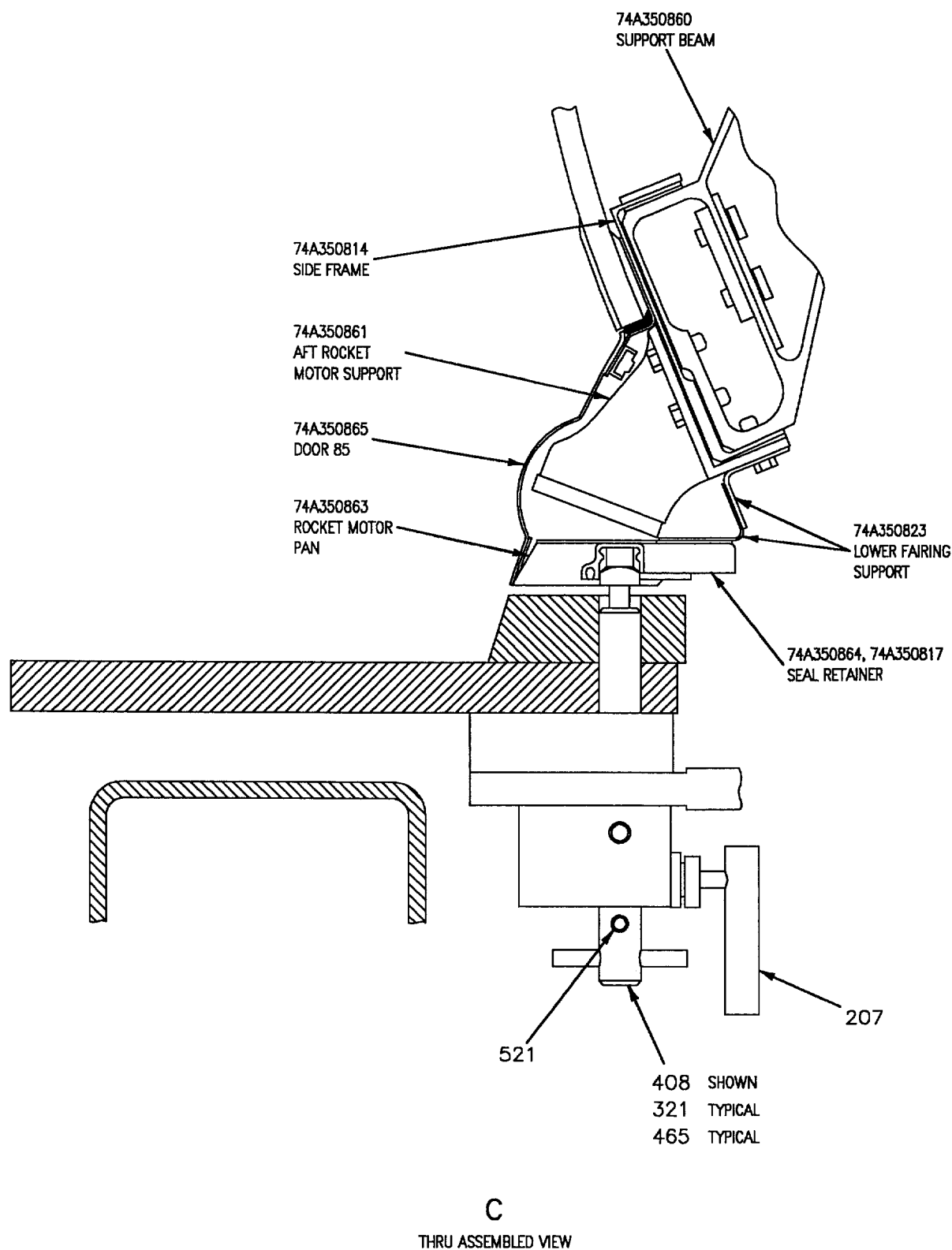


Figure 15. Replacement - Rocket Motor Pan (Sheet 3)

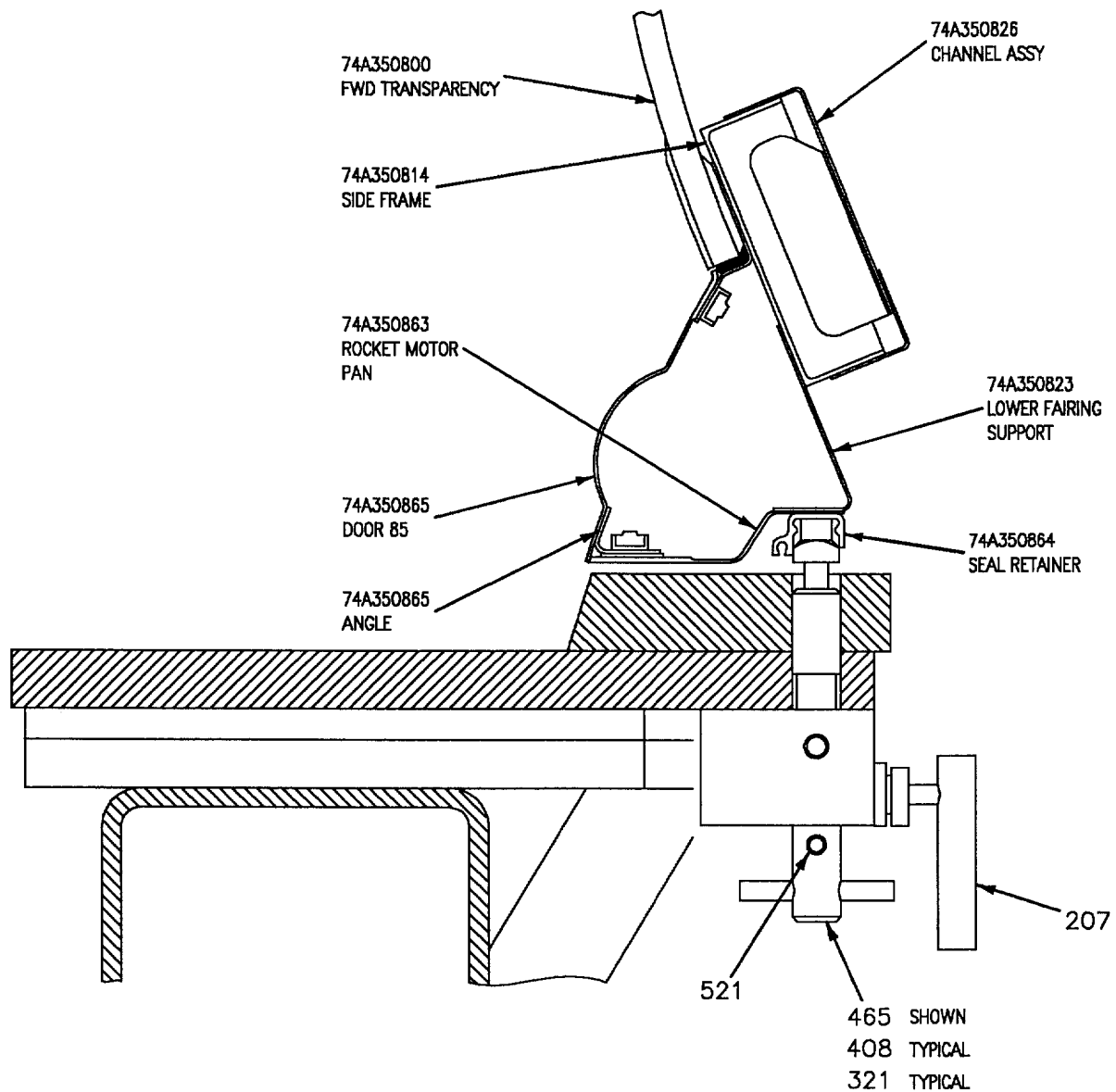


Figure 15. Replacement - Rocket Motor Pan (Sheet 4)

DETAIL NO.	NAME	FUNCTION
176	L-pin	Locates locator blocks in correct X, Y, and Z plane.
207	L-pin	Secures seal locator pin (details 321, 408, and 465) in locating position.
321	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location.
332, 334	Lower fairing support locator	Provides Z plane location at Y363.650.
408	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y283.488.
465	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y266.565, Y287.073, Y295.840, Y303.326, Y308.073, Y315.586, Y323.585, Y331.084, Y341.328, Y342.076, and Y350.452.
521	Roll pin	Used as a directional indicator to determine position of locator pin (details 321, 408, and 465).

Figure 15. Replacement - Rocket Motor Pan (Sheet 5)

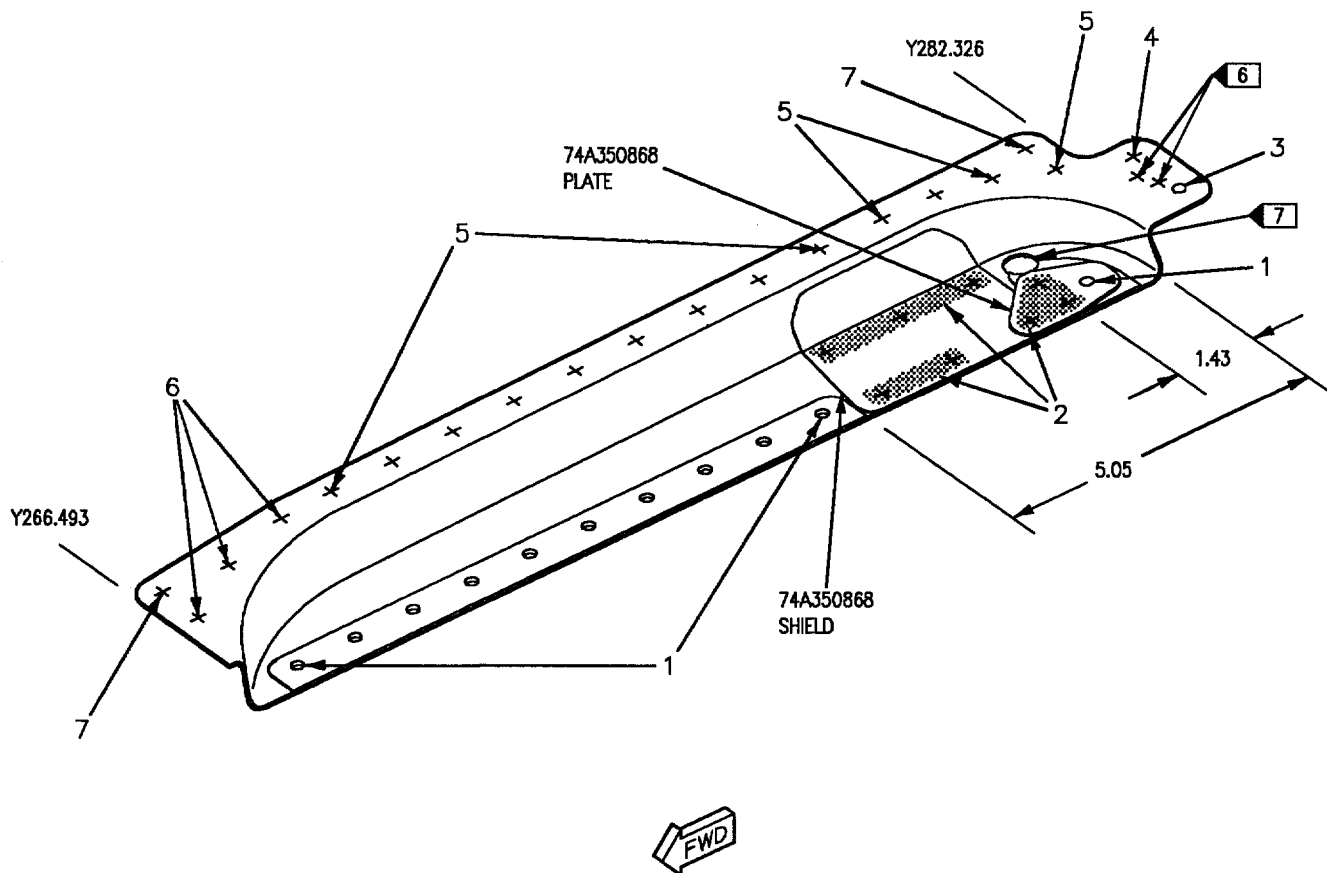


Figure 16. Rocket Motor Pan, 74A350863, Fastener Index (Sheet 1)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 2	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1			0.195 +0.007 -0.000	T.F.I.M.25.0201106 0.1960 DRILL	ST3M4553L21 3			ST3M719C3M1 4
2			0.128 +0.005 -0.000	T.F.I.M.25.0201056 0.1285 DRILL	ST3M748AD4 5			
3			0.195 +0.007 -0.000	T.F.I.M.25.0201106 0.1960 DRILL	NAS653V4	AN960JD10		ST3M720C3M1 6
4			0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1399C5A4			
5			0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1399C5A3			
6			0.161 +0.005 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	MS20426AD5			
7			0.161 +0.005 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	MS20470AD5			
<p style="text-align: center;">LEGEND</p> <p>1 For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07).</p> <p>2 Part of 74D110325-1001 aircraft structure repair tool kit (A1-F18AC-SRM-200, WP004 16).</p> <p>3 Countersink holes to flushness requirement of fastener to bottom surface of 74A350863 pan.</p> <p>4 Plate nut attached to 74A350865 angle using ST3M675-3-3 rivets.</p> <p>5 Double countersink holes to flushness requirement of fastener. Install rivet with manufacture head on bottom side.</p> <p>6 Plate nut attached to 74A350863 pan using ST3M675-3-4 rivets. Hole diameter for rivets attaching plate nut is 0.098 +0.005 -0.000.</p> <p>7 Hole diameter is 0.500 inch.</p>								

Figure 16. Rocket Motor Pan, 74A350863, Fastener Index (Sheet 2)

16. **SEAL GUIDE, 74A350819, REPLACE-
MENT.** See figure 17.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, F/A-18B Canopy	RE174350006-1

Materials Required

Nomenclature	Specification or Part Number
Barrier Material	MIL-B-131, Class 1
Cheesecloth	CCC-C-440, Type 1, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108
Isopropyl Alcohol	TT-I-735
Sealing Compound	MIL-S-83430, Class A-1/2
Tape, Pressure Sensitive	A-A-883, Type 1, 1 inch.



To prevent damage to transparency, be sure barrier material is installed between transparency and ethyl foam. See canopy preparation (WP006 01).

a. Load canopy into fixture (WP006 01).

b. Remove 74A350800 forward transparency (WP006 03).

NOTE

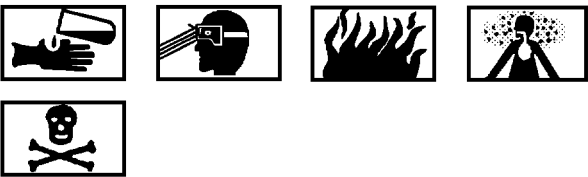
Allow 74A350809 angle to remain riveted to 74A350824 side fairing during removal.

c. Remove fasteners securing 74A350809 angle to 74A350819 seal guide. See detail A for part location. See figure 18 for fastener location.

d. Remove fasteners securing 74A350824 side fairing to mating structure at Y238.270 thru Y266.493. See detail A for part location. See figure 6 for fastener location.

e. Remove fasteners securing 74A350819 seal guide to 74A350814 side frame. See figure 18 for fastener location.

f. Remove 74A350819 seal guide.



Isopropyl Alcohol 2

g. Clean all residual sealant from area where 74A350819 seal guide was removed using plastic scraper and cheesecloth moistened with isopropyl alcohol.

h. Slide lower fairing support locator (details 332, 334) upward and secure in position with L-pin (detail 176). See detail B.

i. Raise seal guide locator pin (detail 322) and secure in position with L-pin (detail 207). See detail C.

j. Position 74A350819 seal guide over seal locator pin (detail 321) and seal guide locator pin (detail 322). See detail C.

k. Raise seal locator pin (details 321, 408, and 465) inside seal retainers and rotate 90° until roll pin (detail 521) points forward and aft. See detail C.

l. Secure seal locator pin (details 321, 408, and 465) by inserting L-pin (detail 207). See detail C.

m. Locate 74A350819 seal guide in X plane location by positioning outboard surface of seal guide flange net with inboard surface of 74A350814 side frame. See detail C.

n. Locate 74A350819 seal guide in Y plane location by maintaining equal gap distance between 74A350802 and 74A350849 seal retainer. See detail A.

o. Locate 74A350819 seal guide in Z plane location:

(1) Position lower surface of seal guide net with seal guide locator pin (detail 322). See detail C.

(2) Maintain 0.250 inch gap between lower surface of seal guide and canopy sill reference plane (detail 187, 188). See detail C.

p. Secure 74A350819 seal guide in position using pressure sensitive tape.



Use care when back drilling not to elongate holes in 74A350814 side frame and 74A350809 angle.

q. Back drill holes in 74A350819 seal guide using existing holes in 74A350814 side frame as guide. See figure 18 for hole diameter and drilling information.

r. Install temporary fasteners to hold 74A350819 seal guide to 74A350814 side frame.

s. Install 74A350824 side fairing section with enough temporary fasteners installed in 74A350841 intercostals and 74A350814 side frame to hold in correct position.

t. Locate and back drill holes in 74A350819 seal guide using existing holes in 74A350809 angle as guide. See figure 18 for hole diameter and drilling information.

u. Remove temporary fasteners, pressure sensitive tape, 74A350824 side fairing, and 74A350819 seal guide.

v. Apply finish system as required to 74A350819 seal guide and any other area requiring finish system touchup (A1-F18AC-SRM-500, WP021 00).

w. Install plate nuts and gang channel on 74A350819 seal guide. See figure 18 for hole locations and retainer information.



Sealing Compound

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x. Fay surface seal interfacing surfaces on 74A350819 seal guide, 74A350814 side frame, 74A350824 side fairing, 74A350841 intercostals, and 74A350809 angle. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

y. Wet install fasteners securing 74A350819 seal guide to 74A350814 side frame. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 18.

z. Wet install fasteners securing 74A350824 side fairing section to 74A350823 lower fairing support, 74A350841 intercostals, and 74A350814 side frame. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 6.

aa. Install fasteners securing 74A350809 angle to 74A350819 seal guide. See figure 18 for fastener information.

ab. Apply fillet seal to all peripheral joints on pressure side of canopy. Fill all voids and joggles on pressure side which cannot be fay or fillet sealed (A1-F18AC-SRM-200, WP011 00).

ac. Reinstall 74A350800 forward transparency (WP006 03).

ad. Apply finish system as required to repair area (A1-F18AC-SRM-500, WP021 00).

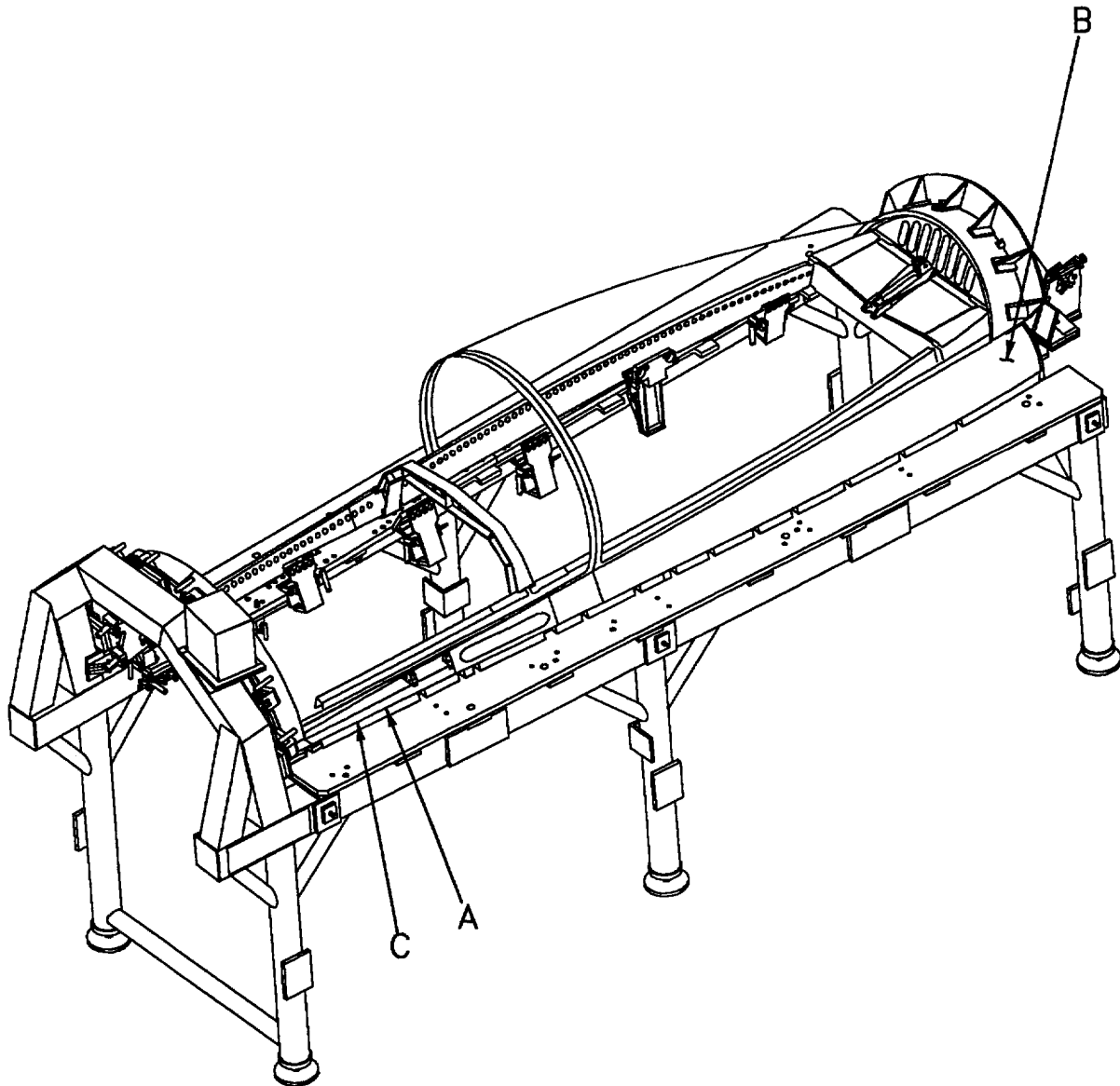
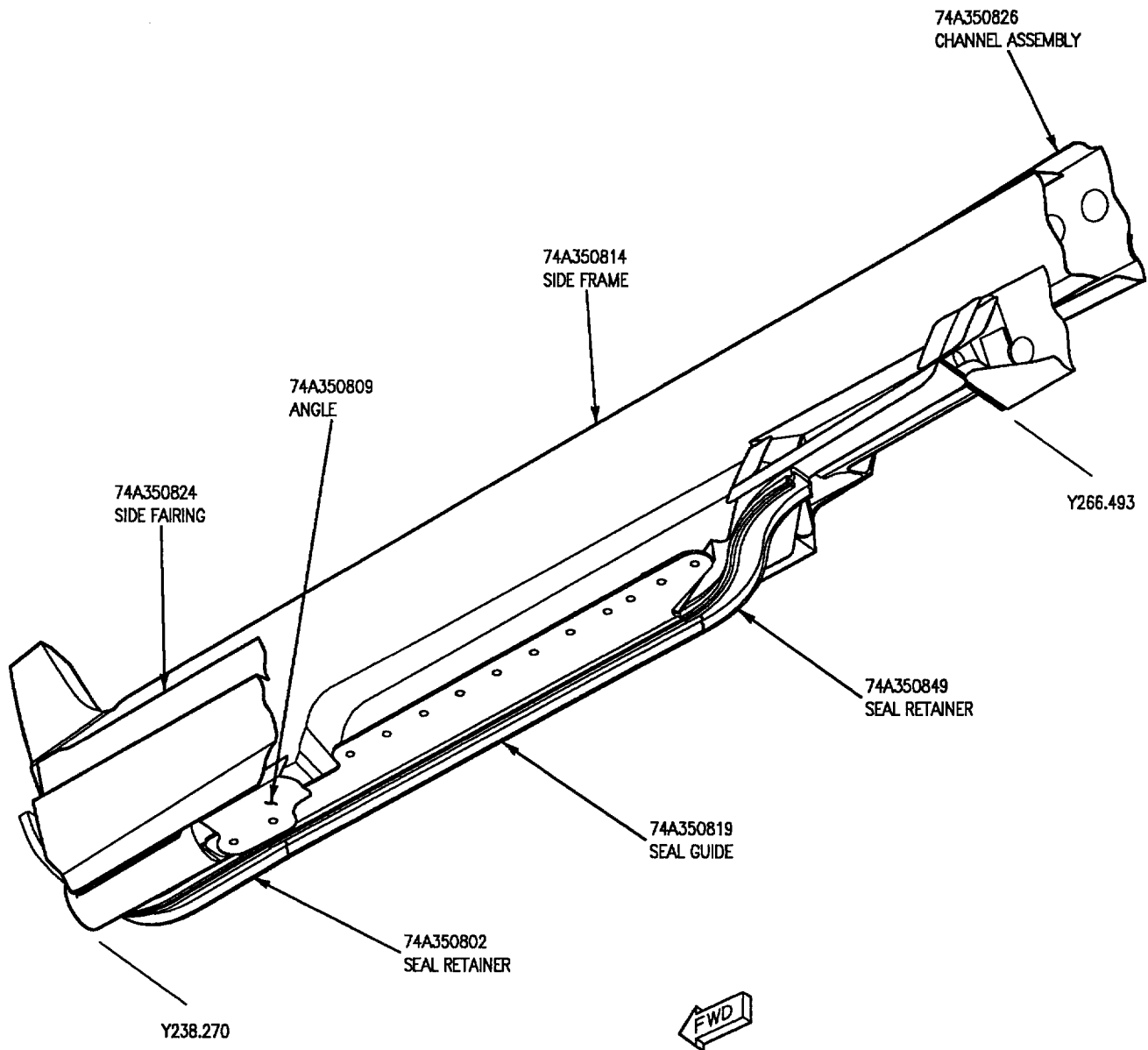
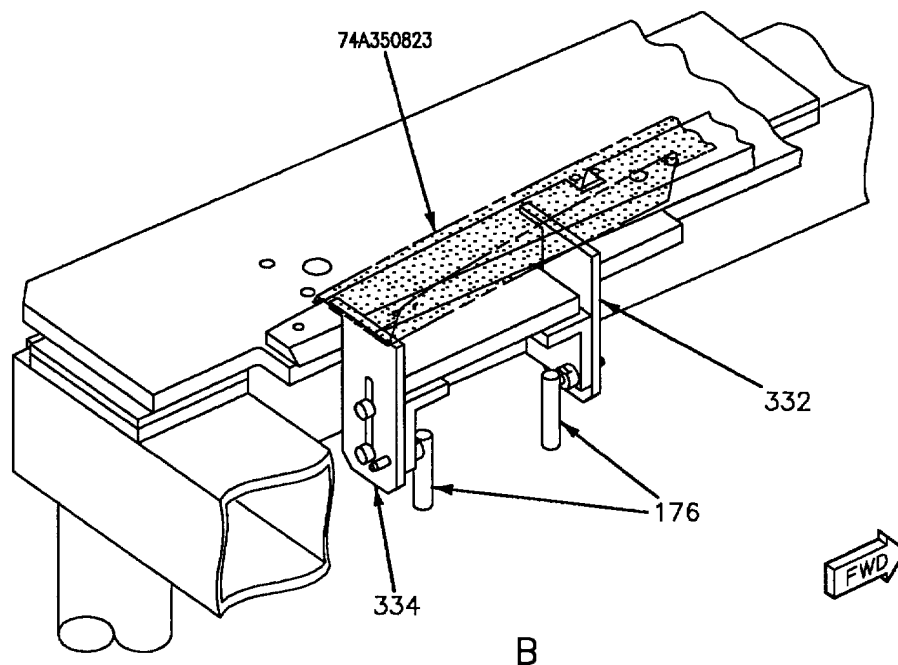


Figure 17. Replacement - Seal Guide (Sheet 1)



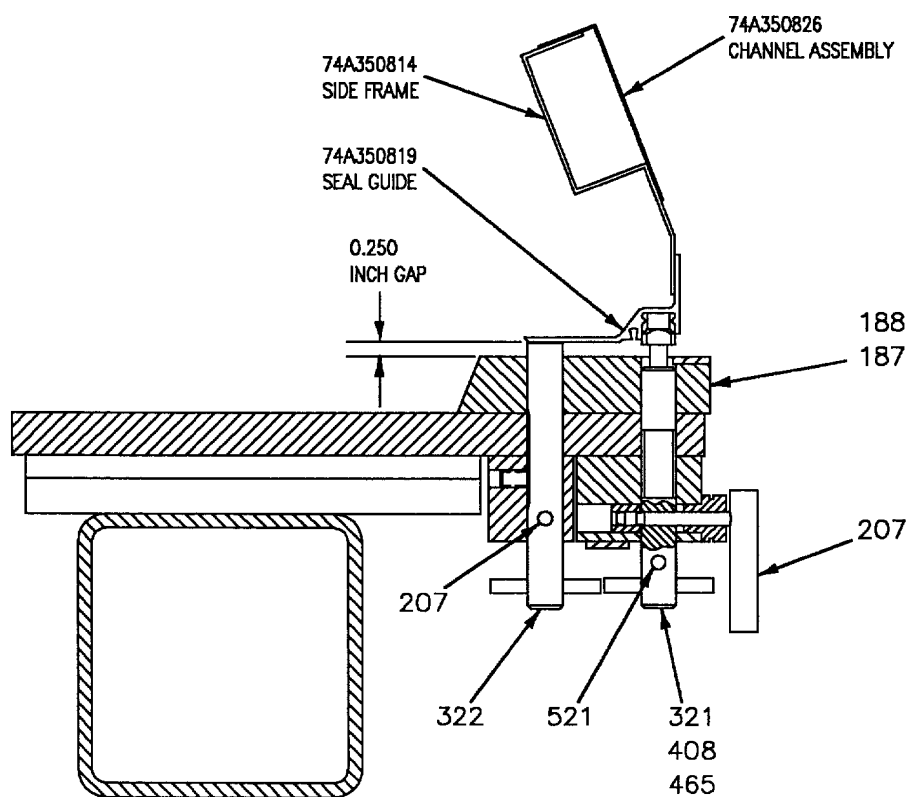
A

Figure 17. Replacement - Seal Guide (Sheet 2)



B

LEFT SIDE SHOWN
RIGHT SIDE TYPICAL

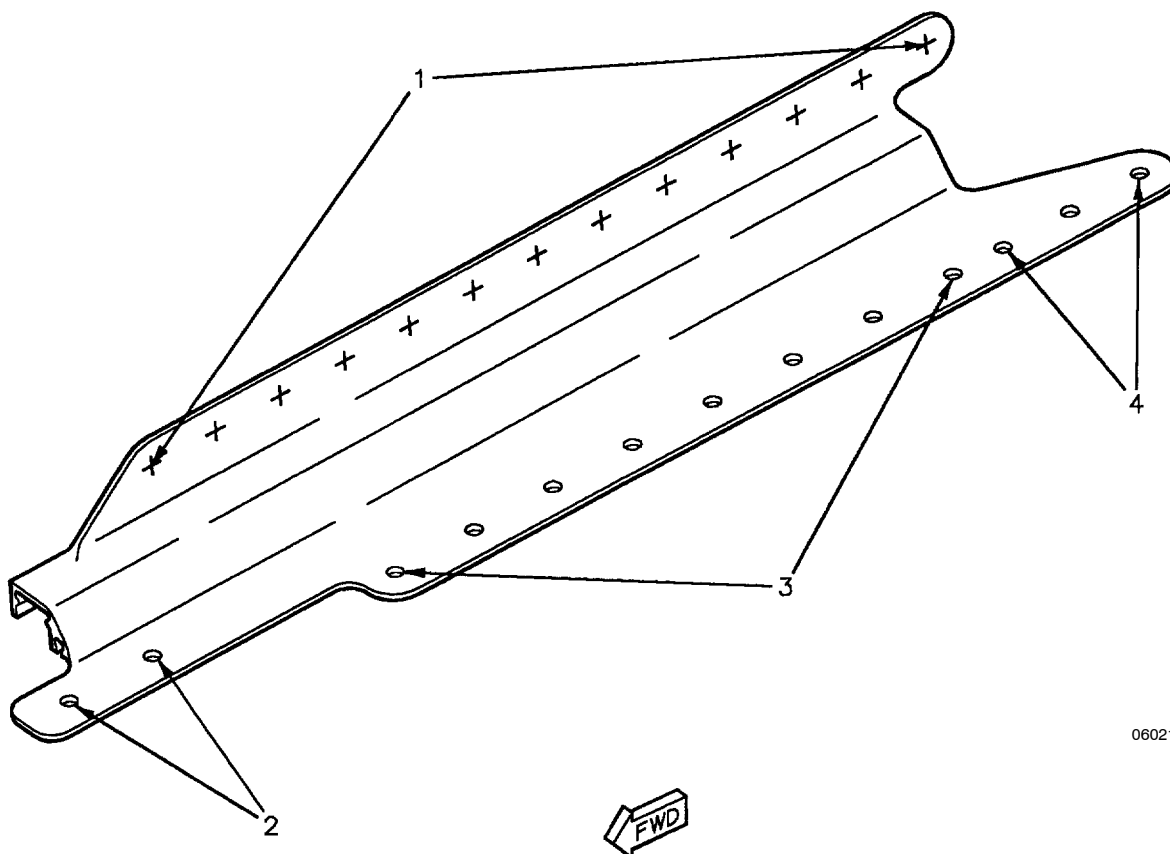


C

Figure 17. Replacement - Seal Guide (Sheet 3)

DETAIL NO.	NAME	FUNCTION
176	L-pin	Locates locator blocks in correct X, Y, and Z plane.
187, 188	Canopy sill reference plane	Simulates canopy sill.
207	L-pin	Secures seal locator pin (details 321, 408, and 465) in locating position.
321	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location.
322	Seal guide locator pin	Provides Z plane location for 74A350819 seal guide.
332, 334	Lower fairing support locator	Provides Z plane location at Y363.650.
408	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y283.488.
465	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y266.565, Y287.073, Y295.840, Y303.326, Y308.073, Y315.586, Y323.585, Y331.084, Y341.328, Y342.076, and Y350.452.
521	Roll pin	Used as a directional indicator to determine position of locator pin (details 321, 408, and 465).

Figure 17. Replacement - Seal Guide (Sheet 4)



06021801

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 2	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1			0.161 +0.005 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	MS20470AD5			
2			0.195 +0.007 -0.000	T.F.I.M.25.0201106 0.1960 DRILL	ST3M455-3L3			ST3M4433A1 3
3			0.195 +0.007 -0.000	T.F.I.M.25.0201106 0.1960 DRILL	ST3M455-3L3			ST3M463C9A8 3
4			0.195 +0.007 -0.000	T.F.I.M.25.0201106 0.1960 DRILL	ST3M455-3L3			ST3M4423A1 3
LEGEND 1 For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07). 2 Part of 74D110325-1001 aircraft structure repair tool kit (A1-F18AC-SRM-200, WP004 16). 3 Attach plate nut and/or gang channel using MS20426AD3 rivets. Hole diameter for rivets is 0.098 +0.005 -0.000 inch. Countersink hole to flushness requirement of fastener.								

Figure 18. Seal Guide, 74A350819, Fastener Index

17. **LATCH HOUSING, 74A350818, RE-PLACEMENT.** See figure 19.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, F/A-18B Canopy	RE174350006-1

Materials Required

Nomenclature	Specification or Part Number
Barrier Material	MIL-B-131, Class 1
Cheesecloth	CCC-C-440, Type 1, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108
Isopropyl Alcohol	TT-I-735
Sealing Compound	MIL-S-83430, Class A-1/2
Tape, Pressure Sensitive	A-A-883, Type 1, 1 inch.



To prevent damage to transparency, be sure barrier material is installed between transparency and ethyl foam. See canopy preparation (WP006 01).

a. Load canopy into fixture (WP006 01).

b. Remove 74A350800 forward transparency (WP006 03).

c. Remove fasteners securing 74A350824 side fairing to mating structure at Y238.270 thru Y266.493. See figure 6 for fastener location.

NOTE

Allow fasteners attaching 74A350849 seal retainer to adjacent structure to remain installed.

d. Remove two fasteners securing 74A350849 seal guide to 74A350823 lower fairing support and 74A350818 latch housing. See figure 19 for part and fastener location.

e. Remove four fasteners securing 74A350817 seal retainer to 74A350823 lower fairing support and 74A350818 latch housing. See figure 19 for part and fastener location.

NOTE

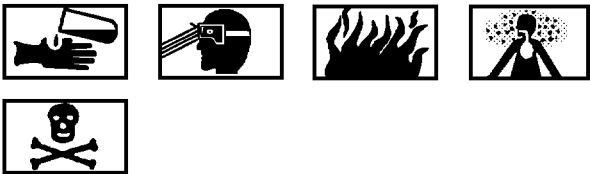
Allow fasteners attaching 74A350864 seal retainer to adjacent structure to remain installed.

f. Remove one fastener securing 74A350864 seal retainer to 74A350823 lower fairing support and 74A350818 latch housing. See figure 19 for part and fastener location.

g. Remove fasteners securing 74A350818 latch housing to 74A350841 intercostal and 74A350814 side frame at Y259.900. See figure 19 for fastener location.

h. Remove fasteners securing 74A350818 latch housing to 74A350841 intercostal at Y266.493. See figure 19 for fastener location.

i. Remove 74A350818 latch housing.



Isopropyl Alcohol

2

j. Clean all residual sealant from area where 74A350818 latch housing was removed using plastic scraper and cheesecloth moistened with isopropyl alcohol.

k. Locate 74A350818 latch housing in X plane by positioning upper flange of latch housing net with out-board surface of 74A350814 side frame.

l. Locate 74A350818 latch housing in Y plane by positioning forward flange of latch housing net with aft surface of 74A350841 intercostal at Y259.900.

m. Locate 74A350818 latch housing in Z plane by positioning bottom surface of latch housing net with upper surface of 74A350823 lower fairing support.

n. Secure 74A350818 latch housing in position using C-clamps or pressure sensitive tape.



Use care when back drilling not to elongate holes in mating structure.

o. Locate and back drill holes in forward and aft flange of 74A350818 latch housing using existing holes in 74A350814 side frame and 74A350841 intercostals as guide. See figure 19 for hole diameters and drilling information.

p. Locate and back drill holes in bottom surface of 74A350818 latch housing using existing holes in 74A350849, 74A350817, 74A350864 seal retainers and 74A350823 lower fairing support as guide. See figure 19 for hole diameters and drilling information.

q. Remove C-clamps and/or pressure sensitive tape and 74A350818 latch housing.

r. Apply finish system as required to 74A350818 latch housing and any other area requiring finish system touchup (A1-F18AC-SRM-500, WP021 00).

s. Fay surface seal interfacing surfaces on 74A350818 latch housing, 74A350841 intercostal, 74A350814 side frame, 74A350823 lower fairing support, and 74A350849, 74A350817, and 74A350864 seal retainers. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

t. Wet install fasteners securing 74A350849, 74A350817, and 74A350864 seal retainers to 74A350823 lower fairing support and 74A350818 latch housing. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 19.

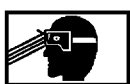
u. Wet install fasteners securing 74A350818 latch housing to 74A350841 intercostal and 74A350814 side frame at Y259.900. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 19.

v. Wet install fasteners securing 74A350818 latch housing to 74A350841 intercostal at Y266.493. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 19.

w. Apply fillet seal to all peripheral joints on pressure side of canopy. Fill all voids and joggles on pressure side which cannot be fay or fillet sealed (A1-F18AC-SRM-200, WP011 00).

x. Wet install fasteners securing 74A350824 side fairing to 74A350823 lower fairing support, 74A350841 intercostals, and 74A350814 side frame. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 6.

y. Reinstall 74A350800 forward transparency (WP006 03).



Sealing Compound

7

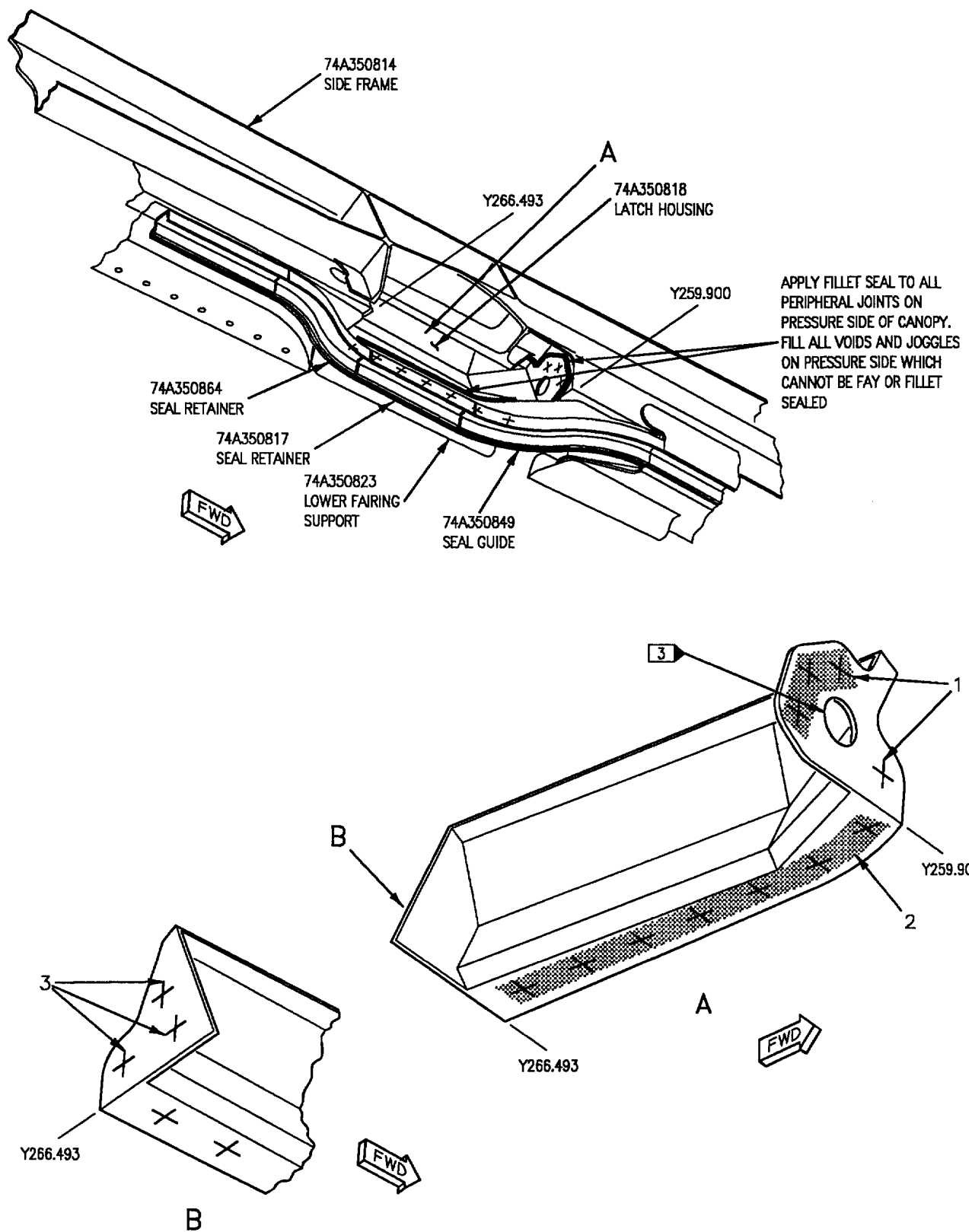


Figure 19. Latch Housing, 74A350818, Fastener Index (Sheet 1)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 2	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1		4	0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1398D5A4			
2		7	0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1399D5A4			
3		3	0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1398D5A3			
<p style="text-align: center;">LEGEND</p> <p>1 For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07).</p> <p>2 Part of 74D110325-1001 aircraft structure repair tool kit (A1-F18AC-SRM-200, WP004 16).</p> <p>3 Hole diameter is 0.68 inch.</p>								

Figure 19. Latch Housing, 74A350818, Fastener Index (Sheet 2)

18. **SEAL GUIDE, 74A350802, REPLACE-
MENT.** See figure 20.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, F/A-18B Canopy	RE174350006-1

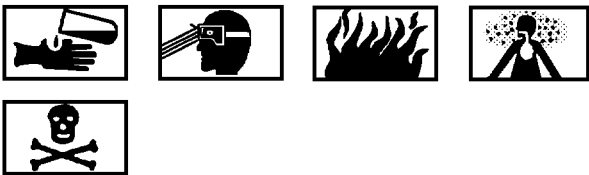
Material Required

Nomenclature	Specification or Part Number
Barrier Material	MIL-B-131, Class 1
Cheesecloth	CCC-C-440, Type 1, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108
Isopropyl Alcohol	TT-I-735
Sealing Compound	MIL-S-83430, Class A-1/2



To prevent damage to transparency, be sure barrier material is installed between transparency and ethyl foam. See canopy preparation (WP006 01).

- a. Load canopy into fixture (WP006 01).
- b. Remove five fasteners securing 74A350802 seal guide to 74A350814 side frame. See figure 21 for fastener location. See detail A for part location.
- c. Remove 74A350802 seal guide.



Isopropyl Alcohol

- d. Clean all residual sealant from area where 74A350802 seal guide was removed using plastic scraper and cheesecloth moistened with isopropyl alcohol.
- e. Slide lower fairing support locator (details 332, 334) upward and secure in position with L-pin (detail 176). See details B.
- f. Raise seal locator pin (details 321, 408, and 465) inside seal retainers and rotate 90° until roll pin (detail 521) points forward or aft. See detail C.
- g. Secure seal locator pin (details 321, 408, and 465) by inserting L-pin (detail 207). See detail C.
- h. Locate 74A350802 seal guide in X plane by positioning formed channel in seal guide in line with existing formed channel on 74A350801 arch and 74A350819 seal guide. See detail A.
- i. Locate 74A350802 seal guide in Y plane by maintaining 0.03 inch gap between seal guide and 74A350801 arch. See detail A.
- j. Locate 74A350802 seal guide in Z plane by positioning seal guide net with 74A350814 side frame.
- k. Secure 74A350802 seal guide to 74A350814 side frame using C-clamps.



Use care when back drilling not to elongate holes in 74A350814 side frame.

- l. Locate and drill holes in 74A350802 seal guide using existing holes in 74A350814 side frame as guide. See figure 21 for hole diameter and drilling information.
- m. Countersink holes in 74A350802 seal guide to flushness requirement of fastener. See figure 21 for hole location.
- n. Remove C-clamps and 74A350802 seal guide.
- o. Apply finish system to 74A350802 seal guide and any other area requiring finish system touchup (A1-F18AC-SRM-500, WP021 00).



Sealing Compound

7

p. Fay surface seal interfacing surfaces on 74A350802 seal guide and 74A350814 side frame. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

q. Wet install fasteners securing 74A350802 seal guide to 74A350814 side frame. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 21.

r. Apply fillet seal to all peripheral joints on pressure side of canopy. Fill all voids and joggles on pressure side which cannot be fay or fillet sealed (A1-F18AC-SRM-200, WP011 00). See detail A.

s. Apply finish system as required to repair area (A1-F18AC-SRM-500, WP021 00).

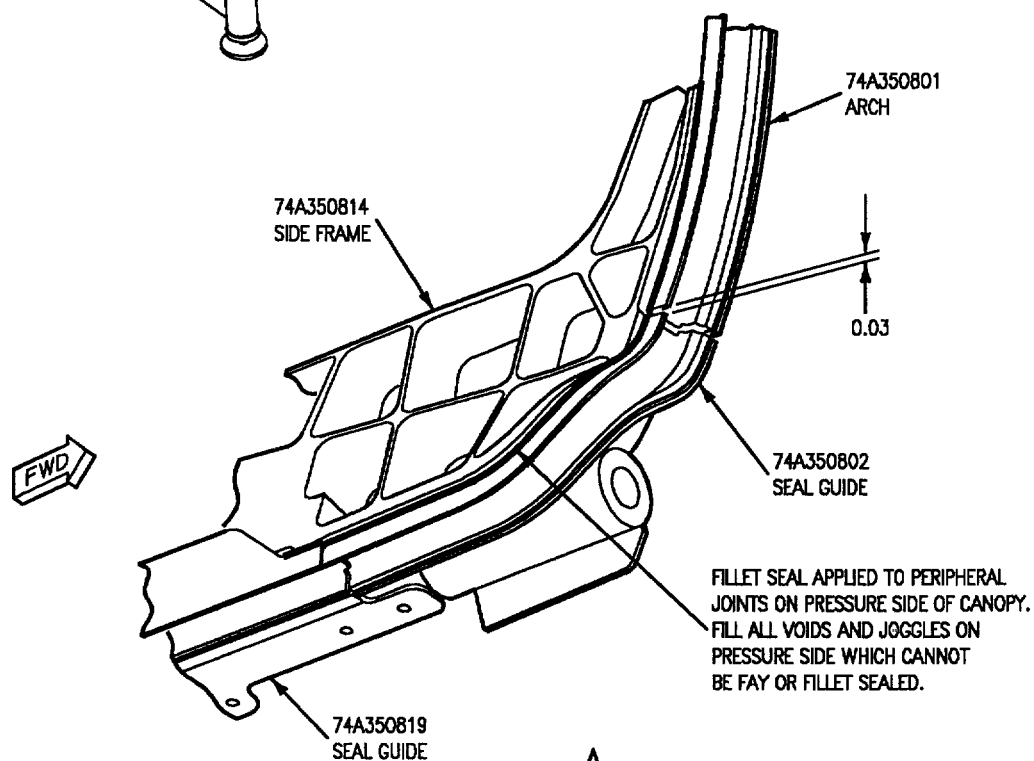
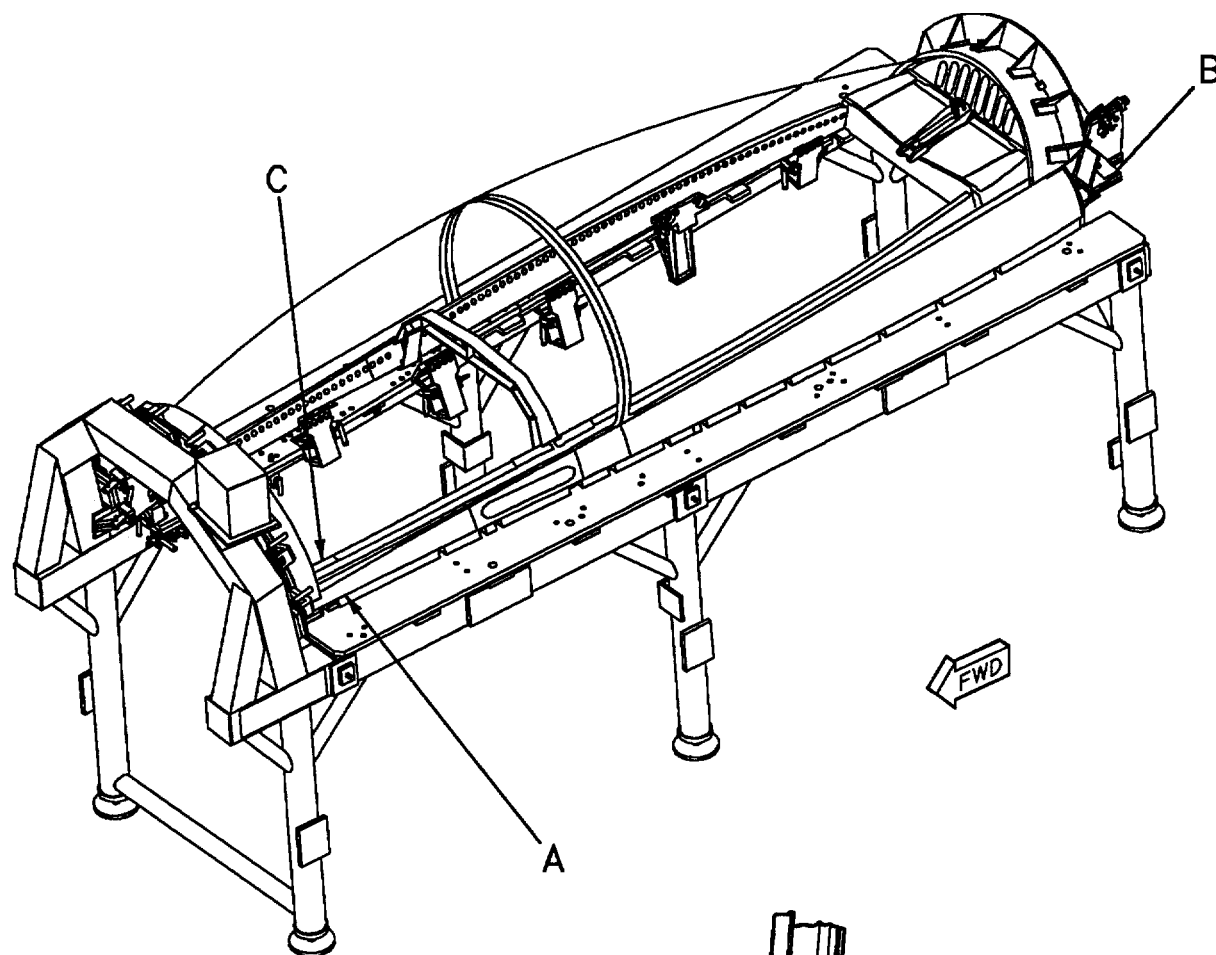


Figure 20. Replacement - Seal Guide (Sheet 1)

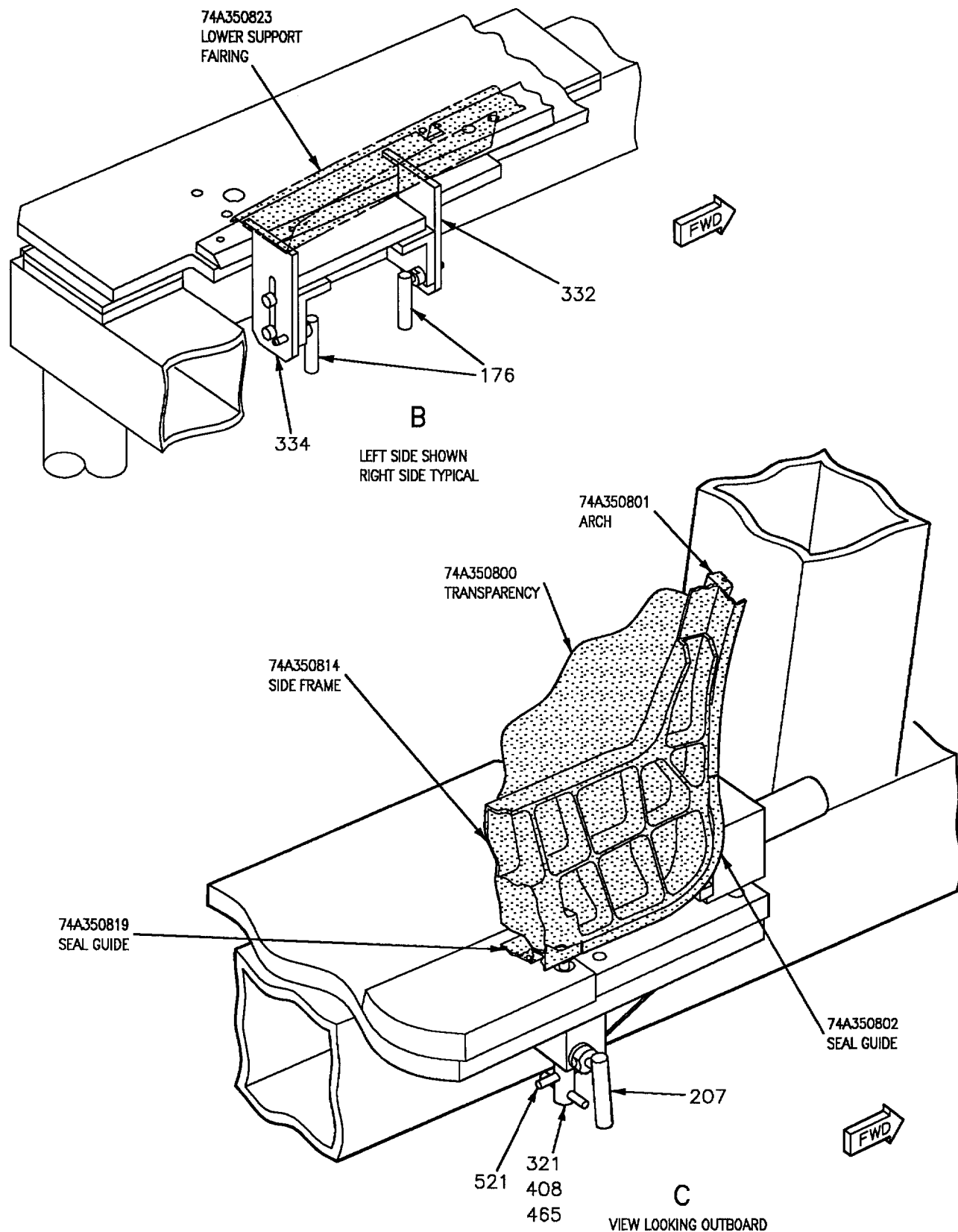
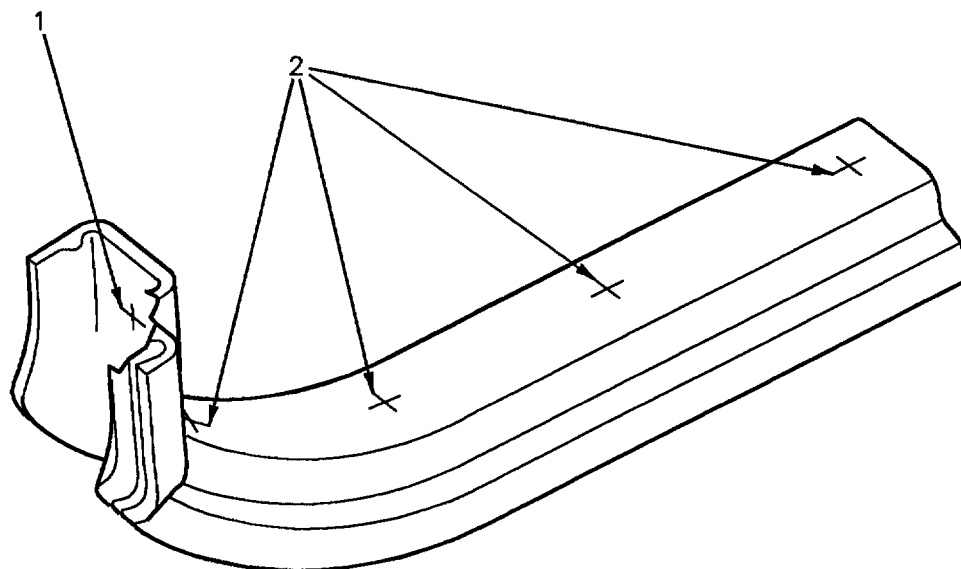


Figure 20. Replacement - Seal Guide (Sheet 2)

DETAIL NO.	NAME	FUNCTION
176	L-pin	Locates locator blocks in correct X, Y, and Z plane.
207	L-pin	Secures seal locator pin (details 321, 408, and 465) in locating position.
321	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location.
332, 334	Lower fairing support locator	Provides Z plane location at Y363.650.
408	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y283.488.
465	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y266.565, Y287.073, Y295.840, Y303.326, Y308.073, Y315.586, Y323.585, Y331.084, Y341.328, Y342.076, and Y350.452.
521	Roll pin	Used as a directional indicator to determine position of locator pin (details 321, 408, and 465)

Figure 20. Replacement - Seal Guide (Sheet 3)



06022101

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 2	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1		1	0.165 +0.003 -0.000	T.F.I.M.25.0201074 0.1562 DRILL T.F.I.M.25.116152 0.1647 REAMER	NAS1670-08-3 3			
2		4	0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1399D5A6 3			
LEGEND 1 For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07). 2 Part of 74D110325-1001 aircraft structure repair tool kit (A1-F18AC-SRM-200, WP004 16). 3 Countersink hole to flushness requirement of fastener to bottom surface of seal guide.								

Figure 21. Seal Guide, 74A350802, Fastener Index

19. SEAL GUIDE, 74A350849, INSPECTION AND REPLACEMENT. See figure 22.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, F/A-18B Canopy	RE173450006-1

Materials Required

Nomenclature	Specification or Part Number
Barrier Material	MIL-B-131, Class 1
Cheesecloth	CCC-C-440, Type 1, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108
Isopropyl Alcohol	TT-I-735
Sealing Compound	MIL-S-83430, Class A-1/2



To prevent damage to transparency, be sure barrier material is installed between transparency and ethyl foam. See canopy preparation (WP006 01).

20. INSPECTION.

a. Load canopy into fixture (WP006 01).

b. Raise seal locator pin (detail 321 and 465) inside 74A350849 seal guide. See detail A.

NOTE

Seal locator pin (detail 321 and 465) are in locating position when roll pin (detail 521) points forward or aft. See detail A.

c. Rotate seal locator pin (detail 321 and 465) to locating position. See detail A.

d. Check 74A350849 seal guide for correct X and Z plane location by inserting L-pin (detail 207). See detail A.

e. If L-pin (detail 207) cannot be inserted, do steps below:

NOTE

Seal locator pin (detail 321 and 465) are in clearance fit position when roll pin (detail 521) points outboard. See detail B.

(1) Rotate seal locator pin (detail 321 and 465) to clearance fit position. See detail B.

(2) Measure for 0.125 inch nominal dimension between roll pin (detail 521) and pad (detail 520). See detail B.

(3) If distance between roll pin (detail 521) and pad (detail 520) exceeds 0.125 inch nominal dimension, 74A350849 seal guide is out of tolerance and must be replaced.

21. REPLACEMENT.

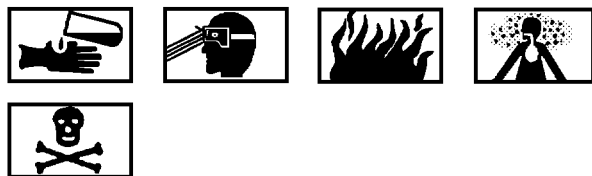
a. Load canopy into fixture (WP006 01).

b. Remove 74A350800 forward transparency (WP006 03).

c. Remove 74A350824 side fairing section from Y238.270 thru Y266.493. See figure 6 for fastener frame.

d. Remove seven fasteners securing 74A350849 seal guide to 74A350823 lower fairing support, 74A350818 latch housing, and 74A350814 side frame. See figure 23 for fastener location. See detail C for part location.

e. Remove 74A350849 seal guide.



Isopropyl Alcohol

2

f. Clean all residual sealant from area where 74A350849 seal guide was removed using plastic scraper and cheesecloth moistened with isopropyl alcohol.

g. Slide lower fairing support locator (details 332, 334) upward and secure in position with L-pin (detail 521). See detail D.

NOTE

Do not engage locator pin (detail 321 and 465) that are locating new 74A350849 seal guide.

h. Raise seal locator pin (details 321, 408, and 465) inside retainers and rotate until roll pin (detail 521) points forward or aft. See detail A.

i. Secure seal locator pin (details 321, 408, 465) by inserting L-pin (detail 207). See detail A.

j. Locate 74A350849 seal guide in X and Z plane:

(1) Position new seal guide over seal locator pin (detail 321 and 465) and under 74A350823 lower fairing support. See detail A.

(2) Raise seal locator pin (detail 321 and 465) inside seal guide and rotate until roll pin (detail 521) points forward or aft. See detail A.

(3) Secure seal locator pin (detail 321 and 465) by inserting L-pin (detail 207). See detail A.

k. Locate 74A350849 seal guide in Y plane by maintaining equal gap distance between 74A350819 seal guide and 74A350817 seal retainer. See detail C.



Use care when back drilling not to elongate hole in 74A350814, 74A350818, and 74A350823.

l. Locate and back drill holes in 74A350849 seal guide using existing holes in 74A350814, 74A350818, and 74A350823 as guide. See figure 23 for hole diameter and drilling information.

m. Countersink holes in 74A350849 seal guide to flushness requirement of fastener. See figure 23 for hole location.

n. Remove 74A350849 seal guide.

o. Apply finish system to new 74A350849 seal guide and any other area requiring finish system touchup (A1-F18AC-SRM-500, WP021 00).



Sealing Compound

7

p. Fay surface seal all interfacing surfaces on 74A350849 seal guide and 74A350823 lower fairing support. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

q. Wet install fasteners securing 74A350849 seal guide to 74A350814, 74A350818, and 74A350823. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 23.

r. Wet install fasteners securing 74A350824 side fairing section to 74A350823 lower fairing support, 74A350841 intercostals, and 74A350814 side frame. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 6.

s. Apply fillet seal to all peripheral joints on pressure side of canopy. Fill all voids and joggles on pressure side which cannot be fay or fillet sealed. (A1-F18AC-SRM-200, WP011 00). See detail C.

t. Reinstall 74A350800 forward transparency (WP006 03).

u. Apply finish system, as required, to repair area (A1-F18AC-SRM-500, WP021 00).

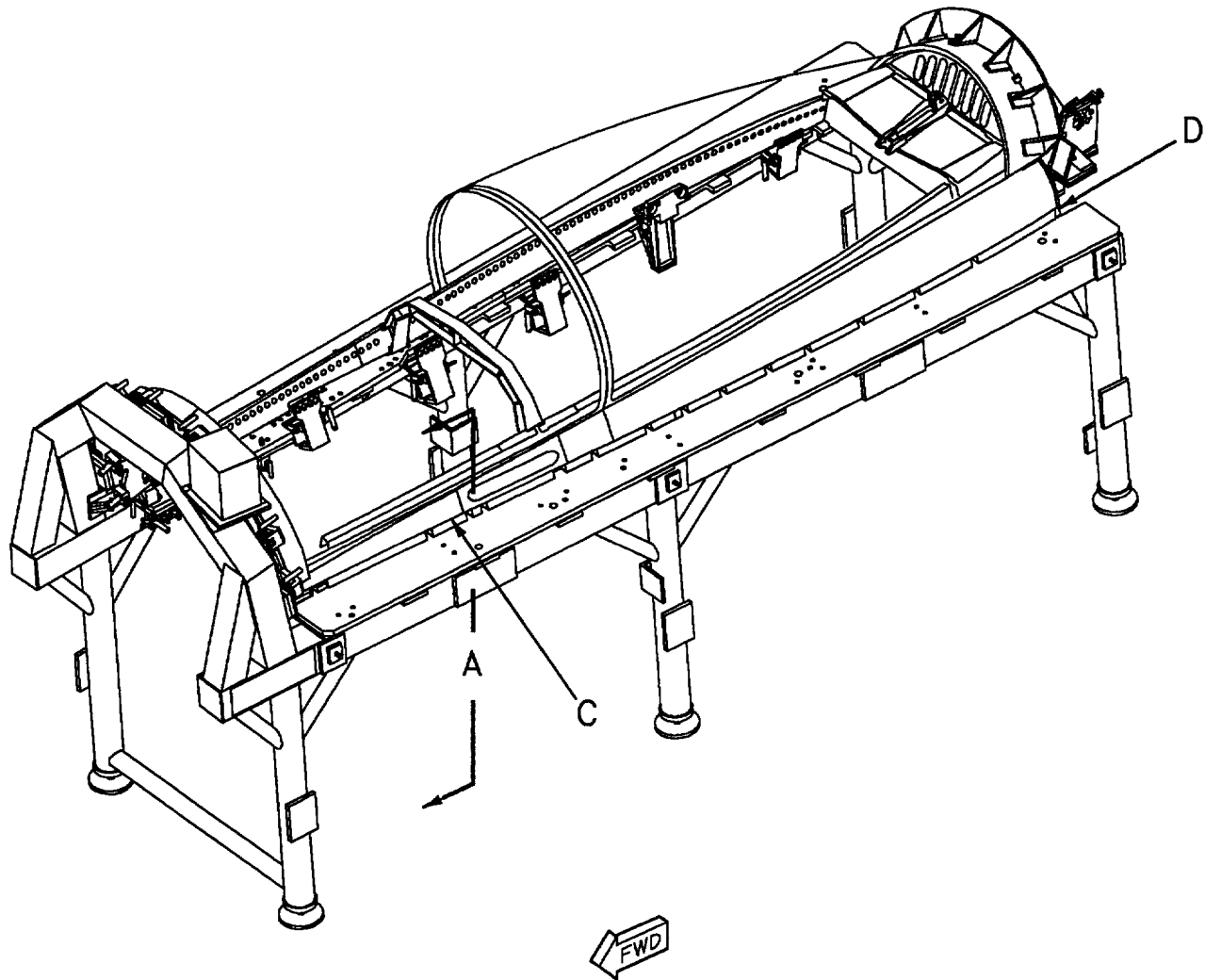


Figure 22. Inspection and Replacement - Seal Guide (Sheet 1)

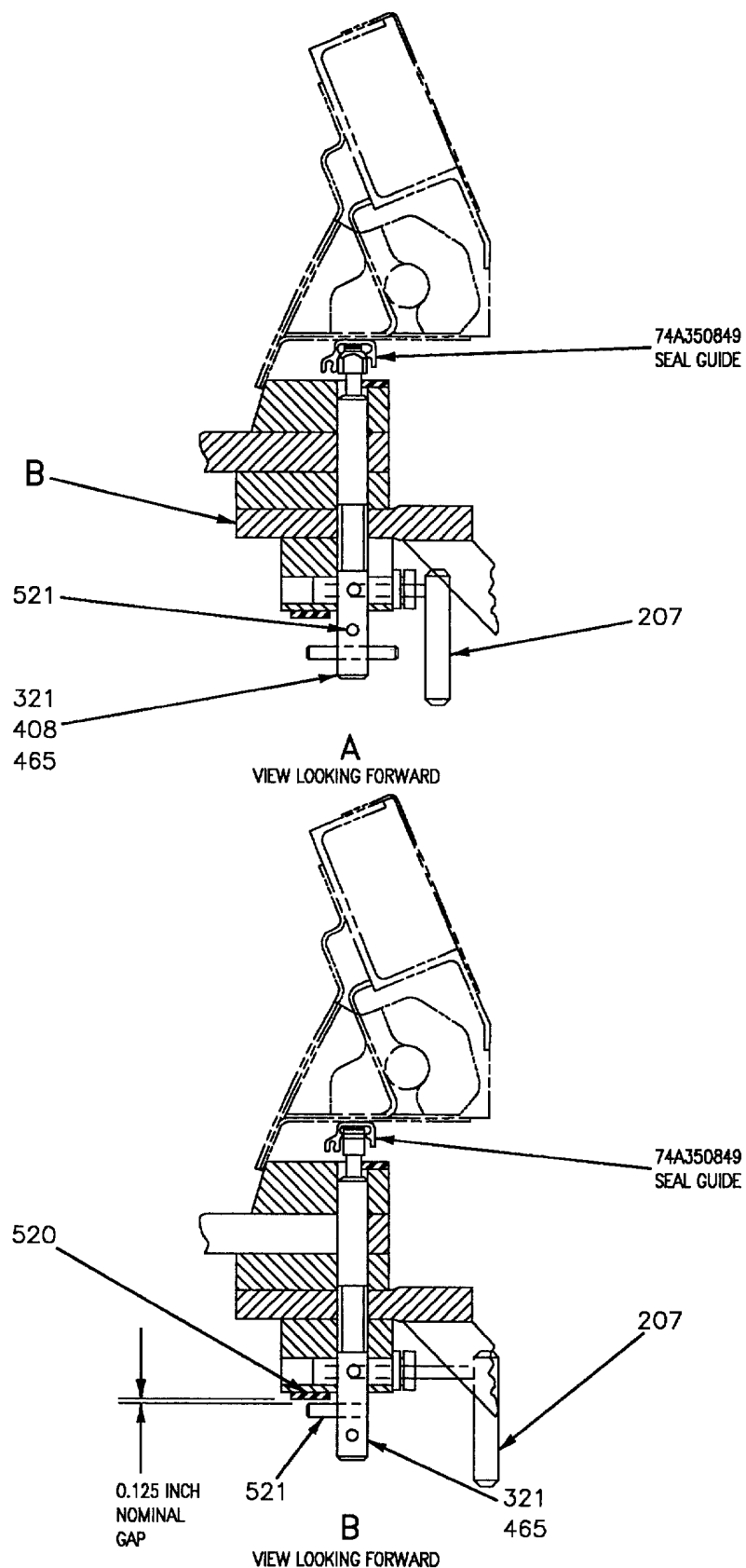


Figure 22. Inspection and Replacement - Seal Guide (Sheet 2)

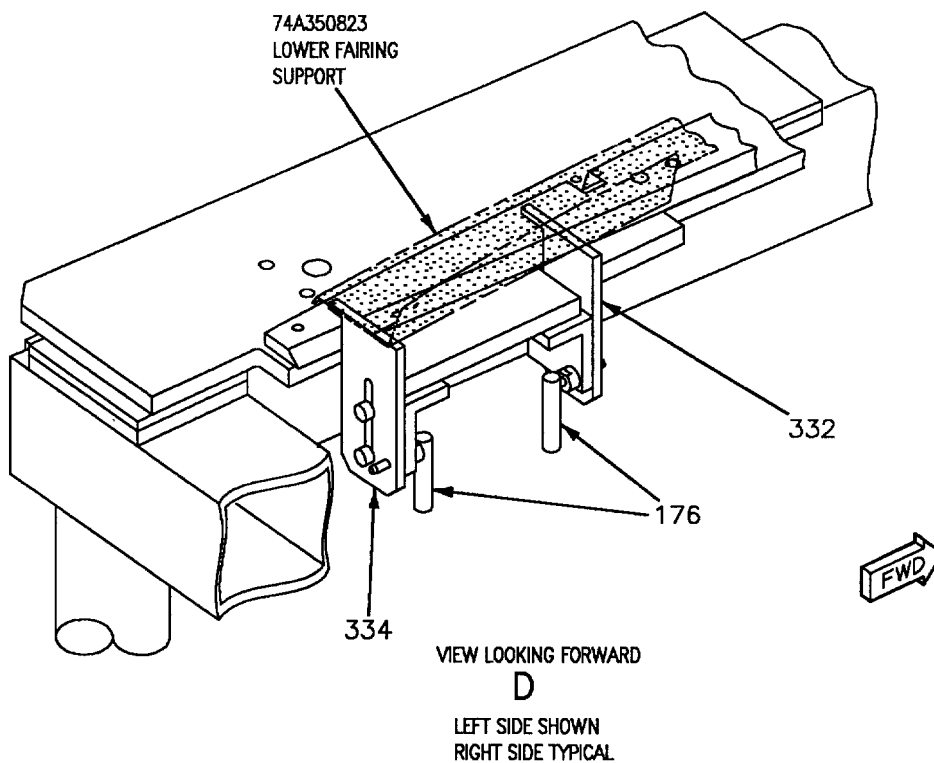
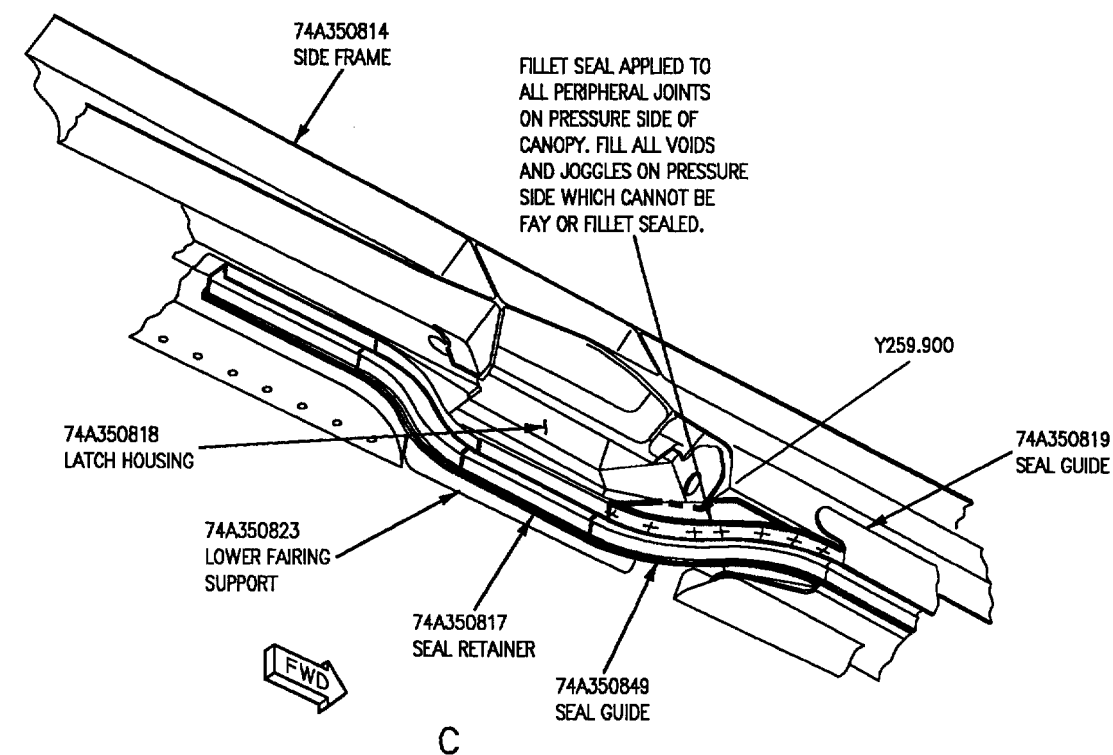
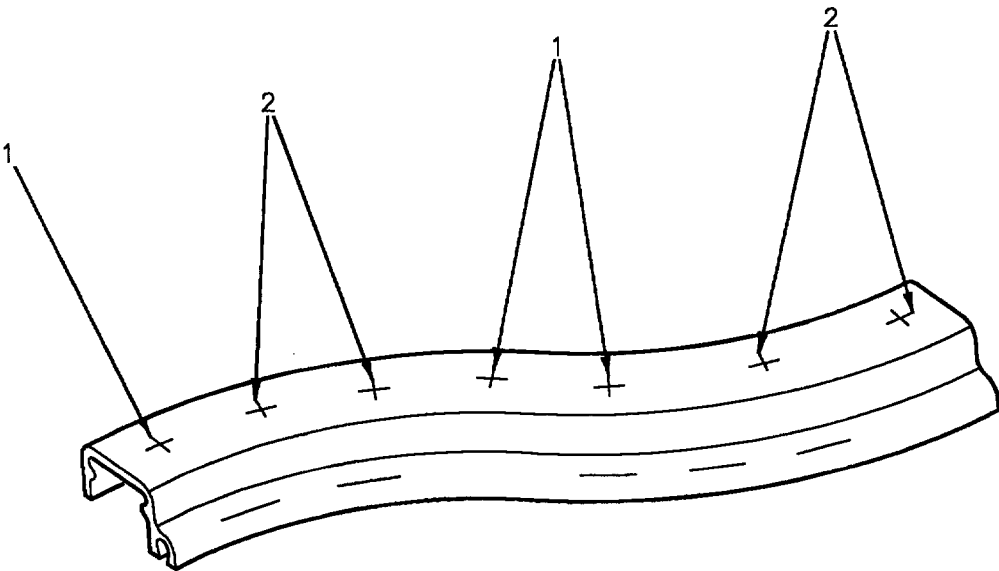


Figure 22. Inspection and Replacement - Seal Guide (Sheet 3)

DETAIL NO.	NAME	FUNCTION
176	L-pin	Locates locator blocks in correct X, Y, and Z plane.
207	L-pin	Secures seal locator pin (details 321, 408, and 465) in locating position.
321	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location.
332, 334	Lower fairing support locator	Provides Z plane location at Y363.650.
408	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y283.488.
465	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y266.565, Y287.073, Y295.840, Y303.326, Y308.073, Y315.586, Y323.585, Y331.084, Y341.328, Y342.076, and Y350.452.
520	Pad	Surface from which 0.125 inch nominal dimension is taken.
521	Roll pin	Used as a directional indicator to determine position of locator pin (details 321, 408, and 465)

Figure 22. Inspection and Replacement - Seal Guide (Sheet 4)



06022301



INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 2	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1		3	0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1399D5A3 3			
2		4	0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1399D5A4 3			
LEGEND								
1 For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07).								
2 Part of 74D110325-1001 aircraft structure repair tool kit (A1-F18AC-SRM-200, WP004 16).								
3 Countersink holes to flushness requirement of fastener to bottom surface of seal guide.								

Figure 23. Seal Guide, 74A350849, Fastener Index

22. **SEAL RETAINER, 74A350864, INSPECTION AND REPLACEMENT.** See figure 24.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, F/A-18B Canopy	RE174350006-1

Materials Required

Nomenclature	Specification or Part Number
Barrier Material	MIL-B-131, Class 1
Cheesecloth	CCC-C-440, Type 1, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108
Isopropyl Alcohol	TT-I-735
Sealing Compound	MIL-S-83430, Class A-1/2



To prevent damage to transparency, be sure barrier material is installed between transparency and ethyl foam. See canopy preparation (WP006 01).

23. **INSPECTION.**

- a. Load canopy into fixture (WP006 01).

NOTE

Inspection is typical for 74A350864 seal retainers located at Y282.326, and seal retainers located at Y266.493.

- b. Raise seal locator pin (details 408 & 465) inside 74A350864 seal retainer. See detail A.

NOTE

Seal locator pin (detail 408 and 465) are in locating position when roll pin (detail 521) points forward or aft.

- c. Rotate seal locator pin (detail 408 and 465) to locating position. See detail A.

- d. Check 74A350864 seal retainers for correct X and Y plane location by inserting L-pin (detail 207). See detail A.

- e. If L-pin (detail 207) cannot be inserted, do sub-steps below:

NOTE

Seal locator pin (details 408 and 465) are in clearance fit position when roll pin (detail 521) points outboard.

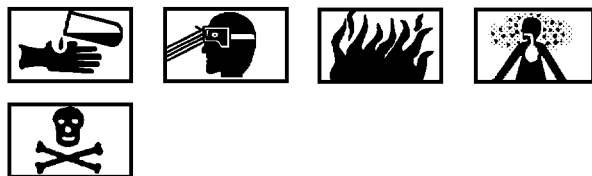
- (1) Rotate seal locator pin (details 408 and 465) to clearance fit position. See detail B.

- (2) Measure for 0.125 inch nominal dimension between roll pin (detail 521) and pad (detail 520). See detail B.

- (3) If distance between roll pin (detail 521) and pad (detail 520) exceeds 0.125 inch nominal dimension, 74A350864 seal retainers are out of tolerance and must be replaced.

24. **REPLACEMENT.**

- a. Load canopy into fixture (WP006 01).
- b. Remove door 85 (A1-F18AC-LMM-010).
- c. Remove canopy jettison rocket motor (A1-F18AC-120-300, WP067 00).
- d. Remove four fasteners attaching 74A350864 seal retainer at Y266.453 and/or remove five fasteners attaching 74A350864 seal retainer at Y282.326. See detail C for part location. See figure 25 for fastener location.
- e. Remove 74A350864 seal retainer.



Isopropyl Alcohol

2

f. Clean all residual sealant from area where 74A350864 seal retainer(s) was removed using plastic scraper and cheesecloth moistened with isopropyl alcohol.

g. Slide lower fairing support locator (details 332 and 334) upward and secure in position with L-pin (detail 176). See detail D.

NOTE

Do not engage locator pin (details 408 and 465) that are locating new 74A350864 seal retainers.

h. Raise seal locator pin (details 321, 408, and 465) inside seal retainers and rotate until roll pin (detail 521) points forward or aft. See detail A.

i. Secure seal locator pin (detail 321, 408, and 465) by inserting L-pin (detail 207). See detail A.

j. Locate 74A350864 seal retainer(s) in X and Z plane:

NOTE

Seal locator pins (detail 408 and 465) are used on seal retainer at Y282.326. Seal locator pin (detail 465) is used on seal retainer at Y266.453.

(1) Position new seal retainer(s) over seal locator pin (detail 408 and 465) and under 74A350863 rocket motor pan. See detail A.

(2) Raise seal locator pin (detail 408 and 465) inside seal retainer(s) and rotate until roll pin (detail 521) points forward or aft. See detail A.

(3) Secure seal locator pin (detail 408 and 465) by inserting L-pin (detail 207). See detail A.

k. Locate 74A350864 seal retainer(s) in Y plane by maintaining equal gap distance between 74A350817 seal retainers. See detail C.



Use care when back drilling not to elongate holes in 74A350823, 74A350841, 74A350818, and 74A350863.

l. Locate and drill holes in 74A350864 seal retainer(s) using existing holes in 74A350818 latch housing, 74A350823 lower fairing support, 74A350841 intercostal, and 74A350863 rocket motor pan as guide. See figure 25 for hole diameter and drilling information.

m. Countersink holes in 74A350864 seal retainer(s) to flushness requirement of fastener. See figure 25 for hole location.

n. Remove 74A350864 seal retainer(s).

o. Apply finish system to new 74A350864 seal retainer and any other area requiring finish system touchup (A1-F18AC-SRM-500, WP021 00).



Sealing Compound

7

p. Fay surface seal interfacing surfaces on 74A350864 seal retainer(s), 74A350823 lower fairing support, and 74A350863 rocket motor pan. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

q. Wet install fasteners securing 74A350864 seal retainer(s) to 74A350818 latch housing, 74A350823 lower fairing support, 74A350841 intercostals, and 74A350863 rocket motor pan. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 25.

r. Apply fillet seal to all peripheral joints on pressure side of canopy. Fill all voids and joggles on pressure side which cannot be fay or fillet sealed (A1-F18AC-SRM-200, WP011 00). See detail C.

s. Install canopy jettison rocket motor (A1-F18AC-120-300, WP067 00).

t. Install door 85 (A1-F18AC-LMM-010).

u. Apply finish system as required to repair area (A1-F18AC-SRM-500, WP021 00).

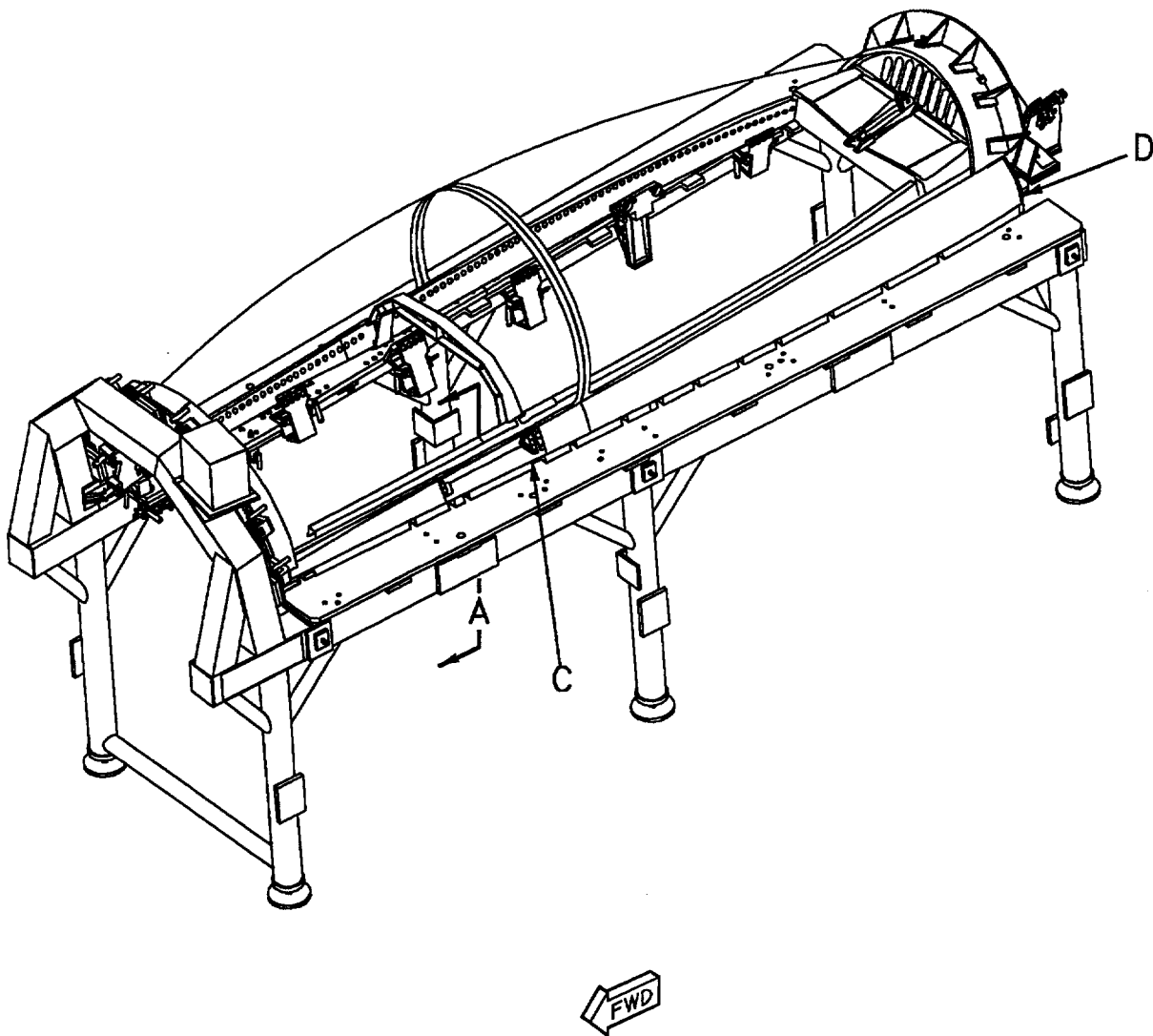


Figure 24. Inspection and Replacement - Seal Retainer (Sheet 1)

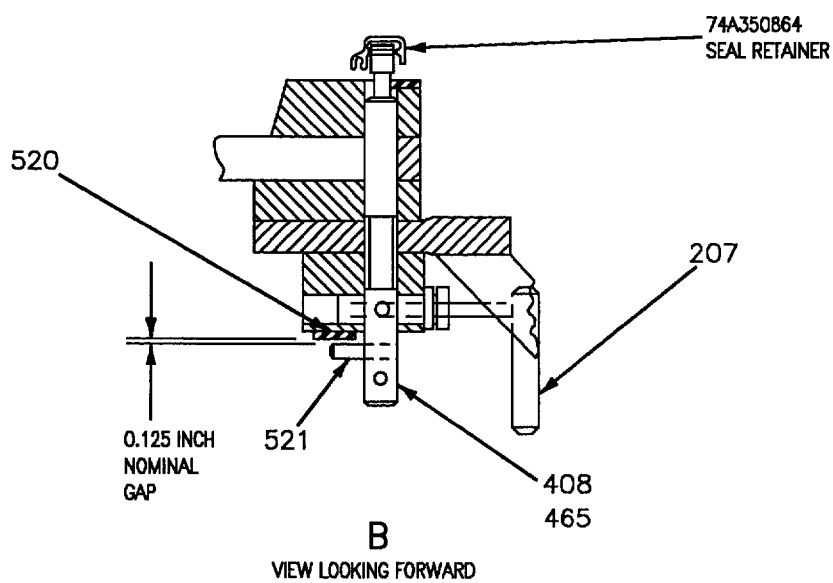
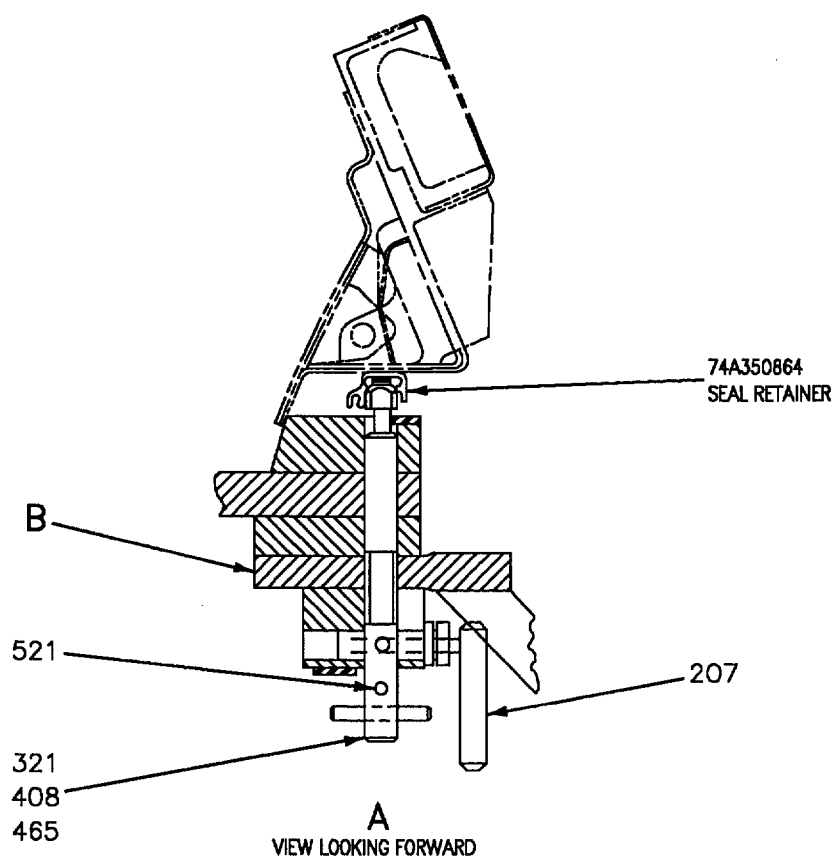
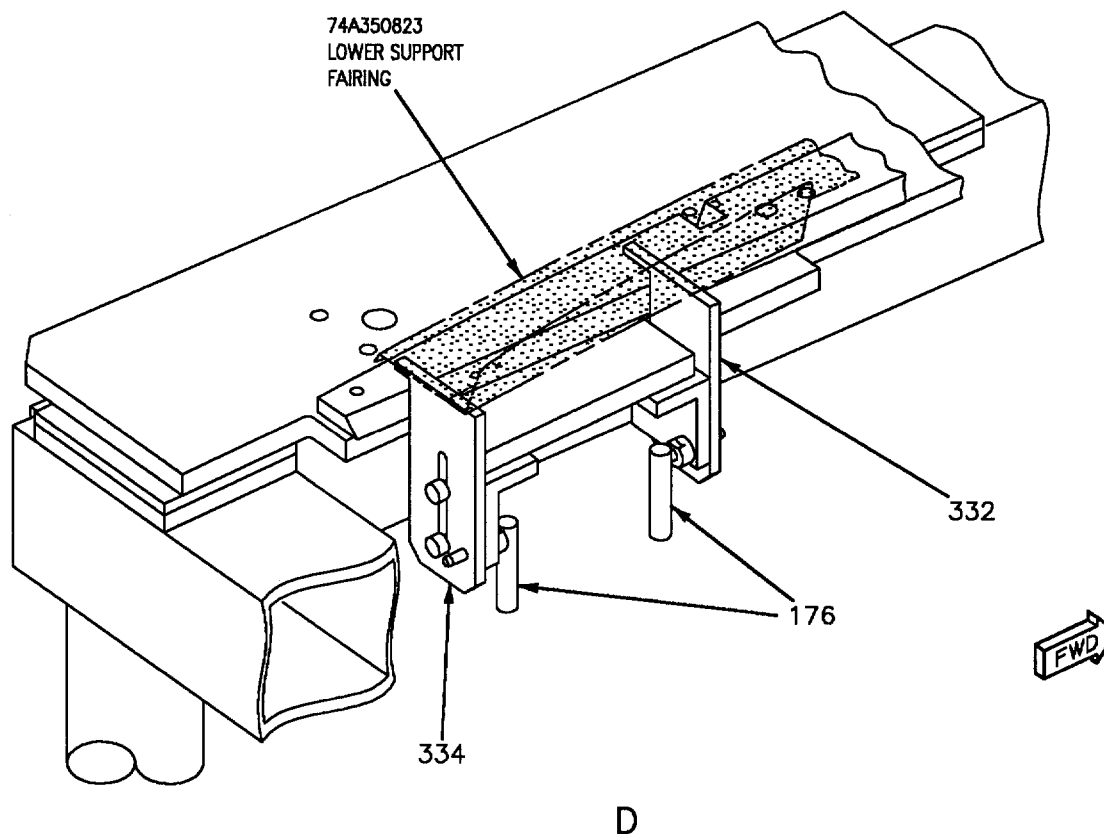
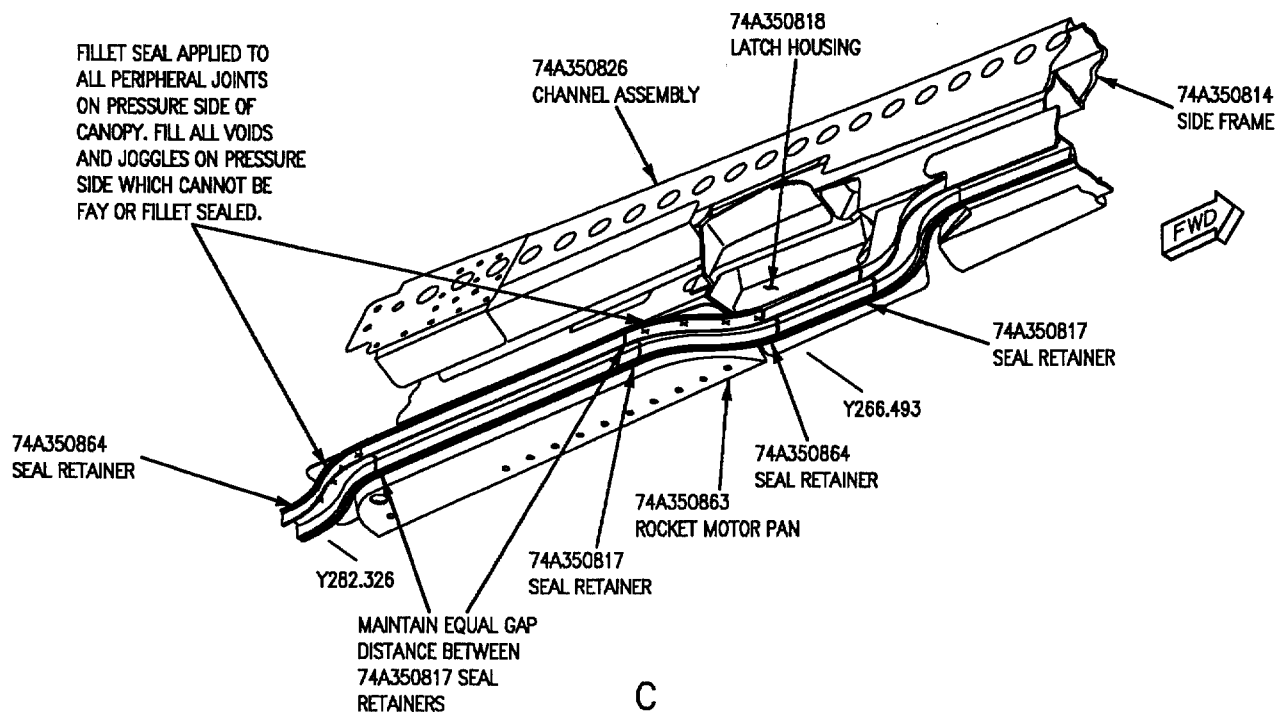


Figure 24. Inspection and Replacement - Seal Retainer (Sheet 2)



LEFT SIDE SHOWN
RIGHT SIDE TYPICAL

Figure 24. Inspection and Replacement - Seal Retainer (Sheet 3)

DETAIL NO.	NAME	FUNCTION
176	L-pin	Locates locator blocks in correct X, Y, and Z plane.
207	L-pin	Secures seal locator pin (details 321, 408, and 465) in locating position.
321	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location.
332, 334	Lower fairing support locator	Provides Z plane location at Y363.650.
408	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y283.488.
465	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y266.565, Y287.073, Y295.840, Y303.326, Y308.073, Y315.586, Y323.585, Y331.084, Y341.328, Y342.076, and Y350.452.
520	Pad	Surface from which 0.125 inch nominal dimension is taken.
521	Roll pin	Used as a directional indicator to determine position of locator pin (details 321, 408, and 465)

Figure 24. Inspection and Replacement - Seal Retainer (Sheet 4)

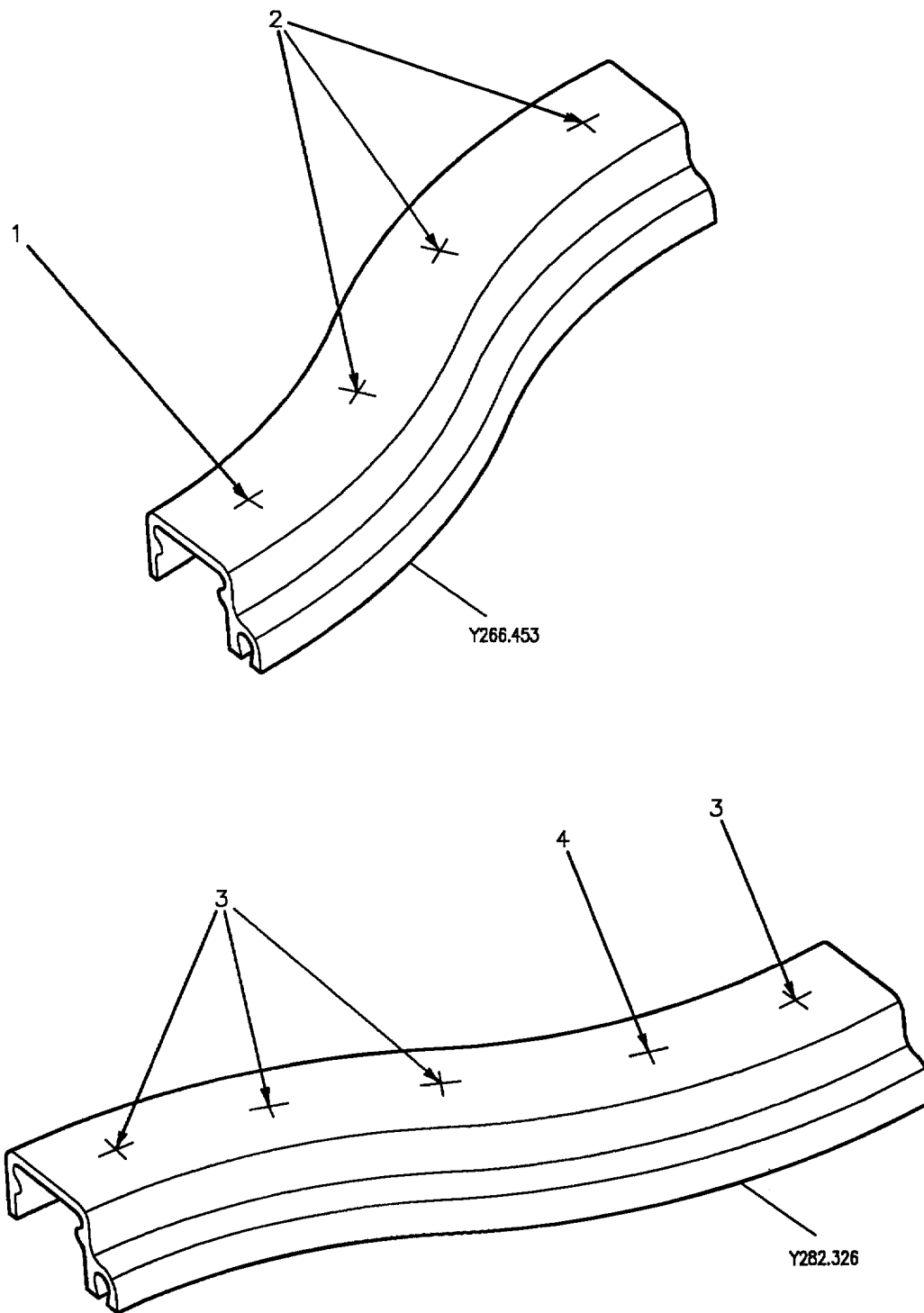


Figure 25. Seal Retainer, 74A350864, Fastener Index (Sheet 1)










INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 	FASTENER 	WASHER	SPACER BUSHING	RETAINER
1		1	0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1399D5A4 			
2		3	0.161 +0.005 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	MS20426AD5 			
3		4	0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1399C5A3 			
4		1	0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1399C5A4 			
<p style="text-align: center;">LEGEND</p> <p> For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07).</p> <p> Part of 74D110325-1001 aircraft structure repair tool kit (A1-F18AC-SRM-200, WP004 16).</p> <p> Countersink holes to flushness requirement of fastener to bottom surface of seal retainer.</p>								

Figure 25. Seal Retainer, 74A350864, Fastener Index (Sheet 2)

25. **SEAL RETAINER, 74A350817, INSPECTION AND REPLACEMENT.** See figure 26.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, F/A-18B Canopy	RE174350006-1

Materials Required

Nomenclature	Specification or Part Number
Barrier Material	MIL-B-131, Glass 1
Cheesecloth	CCC-C-440, Type 1, Class 1
Cushioning Material Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108
Isopropyl Alcohol	TT-I-735
Sealing Compound	MIL-S-83430, Class A-1/2



To prevent damage to transparency, be sure barrier material is installed between transparency and ethyl foam. See canopy preparation (WP006 01).

26. **INSPECTION.**

- a. Load canopy into fixture (WP006 01).

NOTE

Inspection is typical for 74A350817 seal retainer located at Y261.546, Y274.400, and Y287.153 thru Y350.253.

- b. Raise seal locator pin (detail 465) inside 74A350817 seal retainer. See detail A.

NOTE

Seal locator pin (detail 465) is in locating position when roll pin (detail 521) points forward or aft.

- c. Rotate seal locator pins (detail 465) to locating position. See detail A.

- d. Check 74A350817 seal retainers for correct X and Z plane location by inserting L-pin (detail 207). See detail A.

- e. If L-pin (detail 207) cannot be inserted, do sub-steps below:

NOTE

Seal locator pin (detail 465) is in clearance fit position when roll pin (detail 521) points outboard.

- (1) Rotate seal locator pins (detail 465) to clearance fit position. See detail B.

- (2) Measure for 0.125 inch nominal dimension between roll pin (detail 521) and pad (detail 520). See detail B.

- (3) If distance between roll pin (detail 521) and pad (detail 520) exceeds 0.125 inch nominal dimension, 74A350817 seal retainer is out of tolerance and must be replaced.

27. **REPLACEMENT.**

- a. Load canopy into fixture (WP006 01).

NOTE

Remove 74A350817-2007, -2008 seal retainer per step b. Remove 74A350817-2009, -2010 seal retainer per step c. Remove 74A350817-2011, -2012 seal retainer per step d.

- b. Remove 74A350817-2007, -2008 seal retainer per substeps below:

- (1) Remove 74A350800 forward transparency (WP006 03).

- (2) Remove 74A350824 side fairing section from Y238.270 thru Y266.493. See figure 6 for fastener location.

(3) Remove four fasteners attaching seal retainer to 74A350823 lower fairing support and 74A350818 latch housing. See detail C for part location. See figure 27 for fastener location.

(4) Remove seal retainer.

c. Remove 74A350817-2009, -2010 seal retainer per steps below:

(1) Remove door 85 (A1-F18AC-LMM-010).

(2) Remove canopy jettison rocket motor (A1-F18AC-120-300, WP067 00).

(3) Remove 10 fasteners attaching seal retainer to 74A350863 rocket motor pan and 74A350823 lower fairing support. See figure 27 for fastener location. See detail D for part location.

(4) Remove seal retainer.

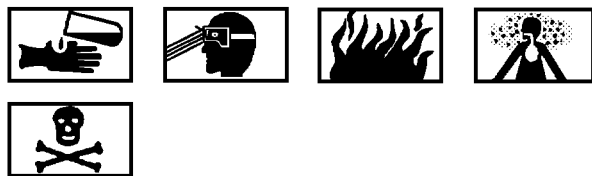
d. Remove 74A350817-2011, -2012 seal retainer per steps below:

(1) Remove 74A350800 aft transparency (WP006 03).

(2) Remove 74A350824 side fairing section from Y283.520 thru Y363.650. See figure 6 for fastener location.

(3) Remove 65 fasteners securing seal retainer to 74A350823 lower fairing support and 74A350841 intercostals. See detail E for part location. See figure 27 for fastener location.

(4) Remove seal retainer.



Isopropyl Alcohol

2

e. Clean all residual sealant from area where 74A350817 seal retainer was removed using plastic scraper and cheesecloth moistened with isopropyl alcohol.

f. Slide lower fairing support locator (details 332 and 334) upward and secure in position with L-pin (detail 176). See detail F.

NOTE

Do not engage locator pin (details 465) that is locating new 74A350817 seal retainers.

g. Raise seal locator pin (details 321, 408, and 465) inside seal retainers and rotate until roll pin (detail 521) points forward or aft. See detail A.

h. Secure seal locator pin (details 321, 408, and 465) by inserting L-pin (detail 207). See detail A.

i. Locate new 74A350817 seal retainer in X and Z plane:

NOTE

Substeps (1), (2), and (3) are typical for:
74A350817-2007, -2008 seal retainer located at Y261.546, 74A350817-2009, -2010 seal retainer located at Y274.400, and
74A350817-2011, -2012 seal retainer located at Y287.153 thru Y350.253.

(1) Position new seal retainer over seal locator pins (detail 465) and under 74A350823 lower fairing support or 74A350863 rocket motor pan. See detail A.

(2) Raise seal locator pin (detail 465) inside seal retainer and rotate until roll pin (detail 521) points forward or aft. See detail A.

(a) Secure seal locator pin (detail 465) by inserting L-pin (detail 207). See detail A.

j. Locate 74A350817 seal retainer in Y plane:

NOTE

Do substep (1) for 74A350817-2007, -2008 seal retainer.

Do substep (2) for 74A350817-2009, -2010 seal retainer.

Do substep (3) for 74A350817-2011, -2012 seal retainer.

(1) Position 74A350817-2007, -2008 seal retainer to maintain equal gap distance between 74A350849 seal guide and 74A350864 seal retainer. See detail C.

(2) Position 74A350817-2009, -2010 seal retainer to maintain equal gap distance between 74A350864 seal retainers. See detail D.

(3) Position -2011, -2012 seal retainer to maintain equal gap between 74A350864 seal retainer and 74A350830 seal retainer. See detail E.



Use care when back drilling not to elongate holes in 74A350823, 74A350841, 74A350863, or 74A350818.

k. Locate and drill holes in 74A350817 seal retainer using existing holes in 74A350823 lower fairing support, 74A350863 rocket motor pan, 74A350841 intercostals, or 74A350818 latch housing as guide. See figure 27 for hole diameter and drilling information.

l. Countersink holes in 74A350817 seal retainer to flushness requirement of fastener. See figure 27 for hole location.

m. Remove 74A350817 seal retainer.

n. Apply finish system to new 74A350817 seal retainer and any other area requiring finish system touchup (A1-F18AC-SRM-500, WP021 00).



Sealing Compound

7

NOTE

Install 74A350817-2007, -2008 seal retainer per step o. Install 74A350817-2009, -2010 seal retainer per step p. Install 74A350817-2011, -2012 seal retainer per step q.

o. Install 74A350817-2007, -2008 seal retainer per substeps below:

(1) Fay surface seal mating surfaces on seal retainer and 74A350823 lower fairing support. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

(2) Wet install four fasteners attaching seal retainer to 74A350823 lower fairing support and 74A350818 latch housing. See detail C. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, see figure 27.

(3) Apply fillet seal to all peripheral joints on pressure side of retainer. Fill all voids and joggles on pressure side which cannot be fay or fillet sealed (A1-F18AC-SRM-200, WP011 00). See detail C.

(4) Wet install fasteners attaching 74A350824 side fairing section to mating structure. Refer to figure 6 for fastener information.

(5) Reinstall 74A350800 forward transparency (WP006 03).

(6) Apply finish system as required to repair area (A1-F18AC-SRM-500, WP021 00).

p. Install 74A350817-2009, -2010 seal retainer per substeps below:

(1) Fay surface seal mating surfaces on seal retainer and 74A350863 rocket motor pan. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

(2) Wet install 10 fasteners attaching seal retainer to 74A350863 rocket motor pan and 74A350823 lower fairing support. See detail D. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 27.

(3) Apply fillet seal to all peripheral joints on pressure side of retainer. Fill all voids and joggles on pressure side which cannot be fay or fillet sealed (A1-F18AC-SRM-200, WP011 00). See detail D.

(4) Reinstall canopy jettison rocket motor (A1-F18AC-120-300, WP067 00).

(5) Reinstall door 85 (A1-F18AC-LMM-010).

(6) Apply finish system as required to repair area (A1-F18AC-SRM-500, WP021 00).

q. Install 74A350817-2011, -2012 seal retainer per substeps below:

(1) Fay surface seal mating surfaces on seal retainer and 74A350823 lower fairing support. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

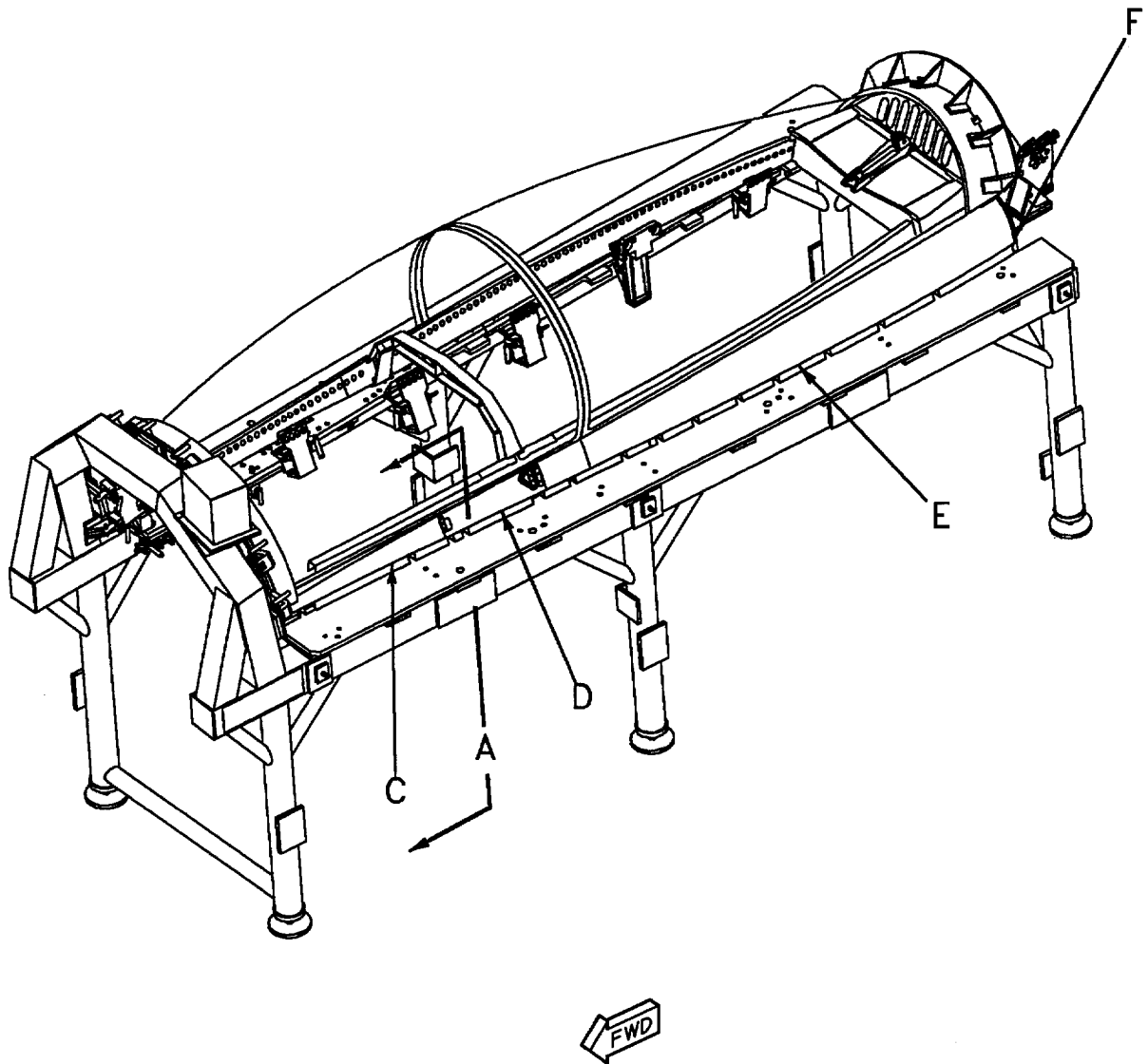
(2) Wet install 65 fasteners attaching seal retainer to 74A350823 lower fairing support and 74A350841 intercostals. See detail E. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 27.

(3) Apply fillet seal to all peripheral joints on pressure side of retainer. Fill all voids and joggles on pressure side which cannot be fay or fillet sealed (A1-F18AC-SRM-200, WP011 00). See detail E.

(4) Wet install fasteners attaching 74A350824 side fairing section to mating structure. Refer to figure 6 for fastener information.

(5) Reinstall 74A350800 aft transparency (WP006 03).

(6) Apply finish system, as required, to repair area (A1-F18AC-SRM-500, WP021 00).



06022601

Figure 26. Inspection and Replacement - Seal Retainer (Sheet 1)

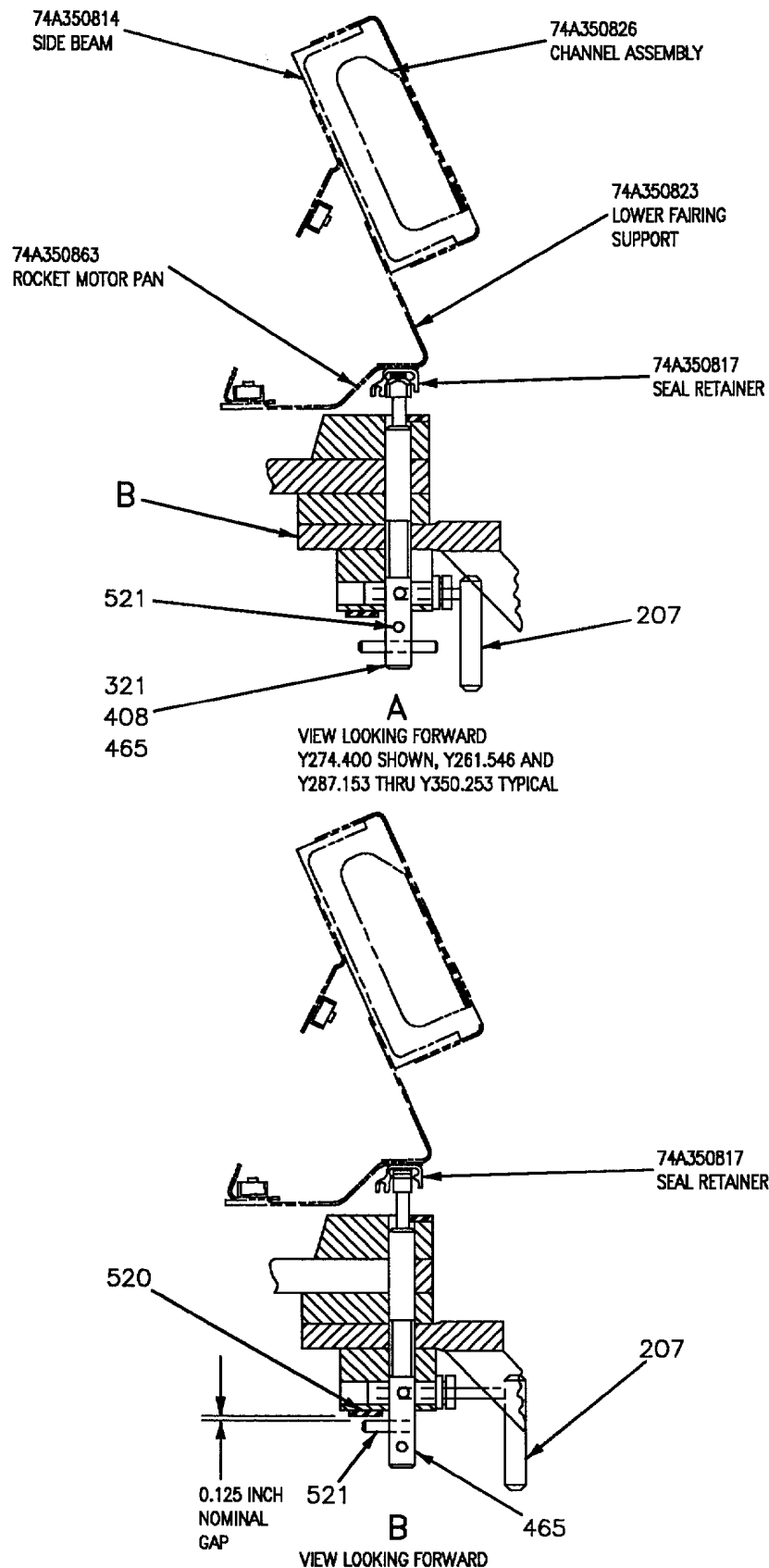
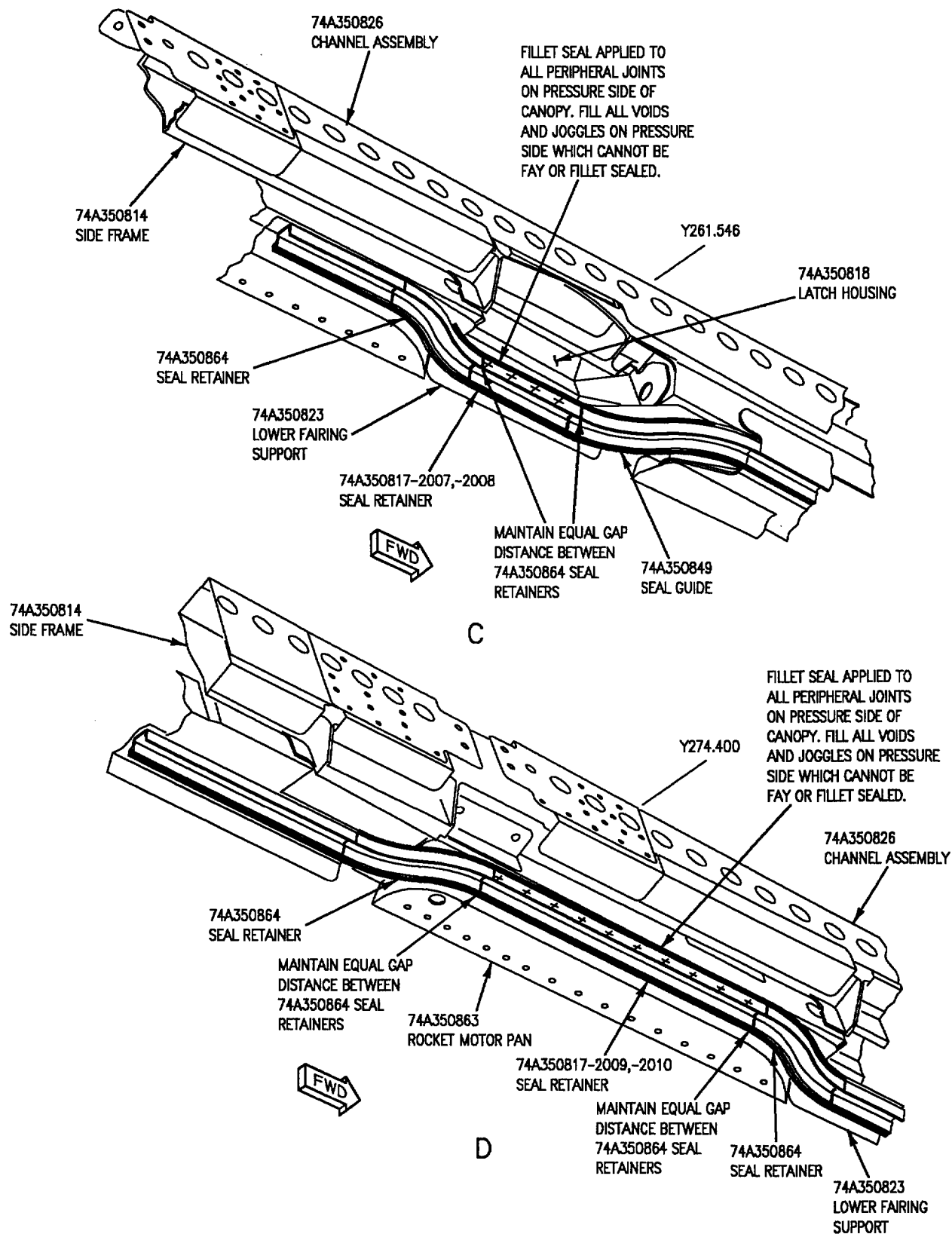
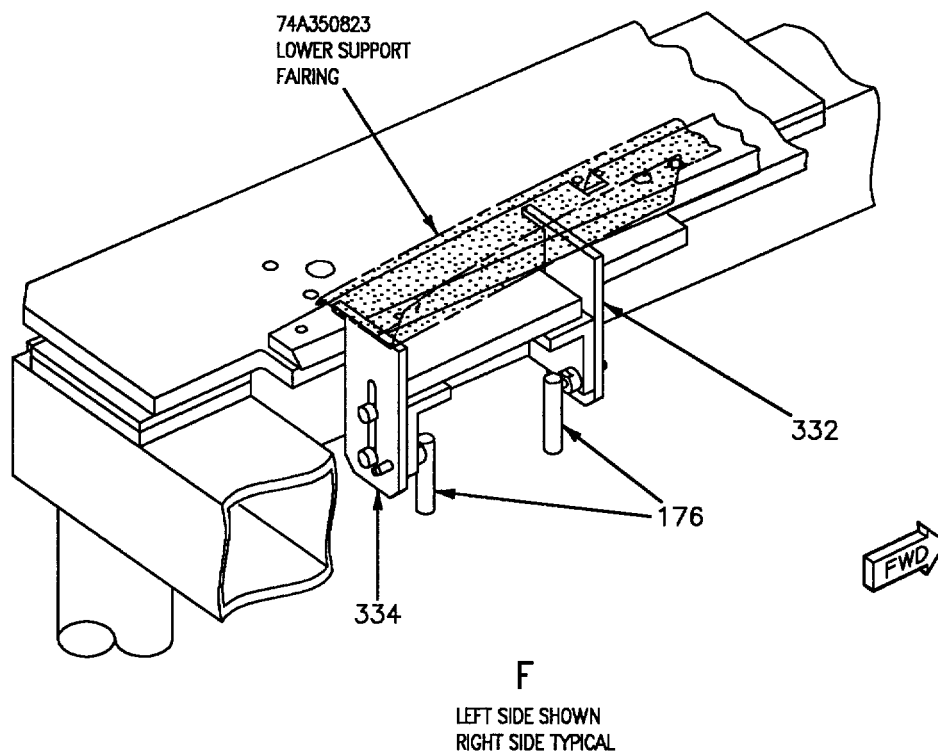
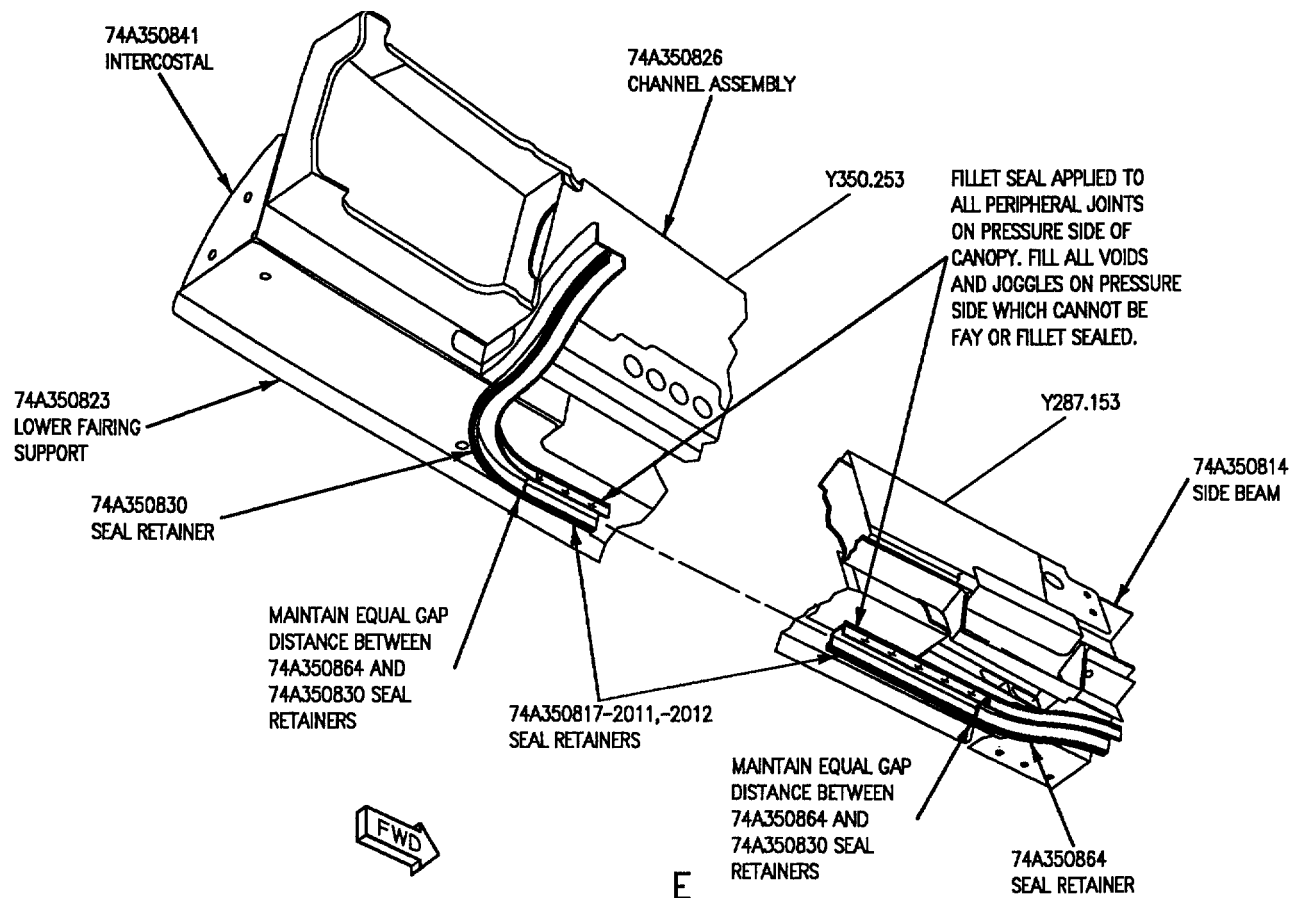


Figure 26. Inspection and Replacement - Seal Retainer (Sheet 2)



06022603

Figure 26. Inspection and Replacement - Seal Retainer (Sheet 3)



06022604

Figure 26. Inspection and Replacement - Seal Retainer (Sheet 4)

DETAIL NO.	NAME	FUNCTION
176	L-pin	Locates locator blocks in correct X, Y, and Z plane.
207	L-pin	Secures seal locator pin (details 321, 408, and 465) in locating position.
321	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location.
332, 334	Lower fairing support locator	Provides Z plane location at Y363.650.
408	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y283.488.
465	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y266.565, Y287.073, Y295.840, Y303.326, Y308.073, Y315.586, Y323.585, Y331.084, Y341.328, Y342.076, and Y350.452.
520	Pad	Surface from which 0.125 inch nominal dimension is taken.
521	Roll pin	Used as a directional indicator to determine position of locator pin (details 321, 408, and 465)

Figure 26. Inspection and Replacement - Seal Retainer (Sheet 5)

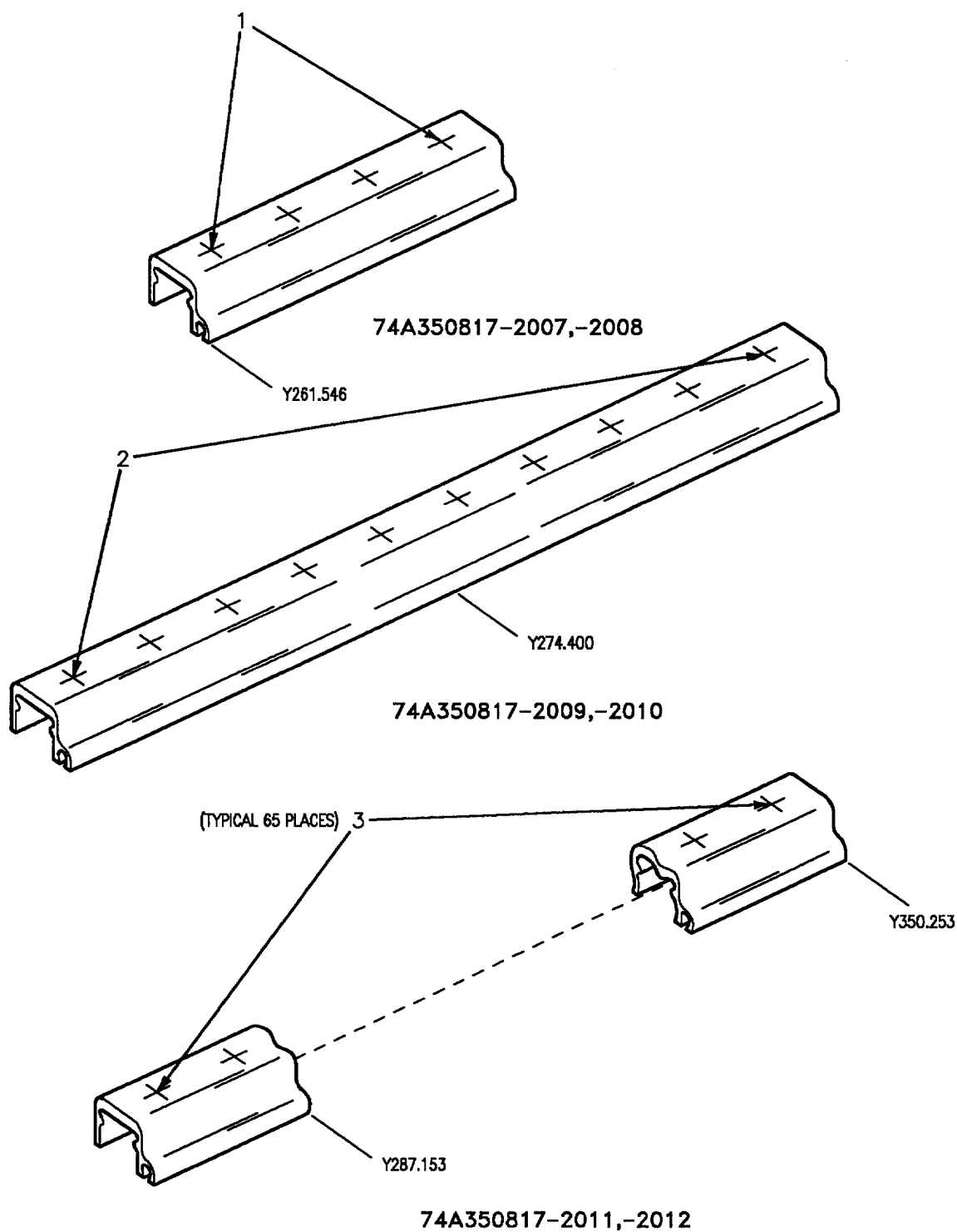


Figure 27. Seal Retainer, 74A350817, Fastener Index (Sheet 1)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 2	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1		4	0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1399D5A4 3			
2		10	0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1399C5A3 3			
3		65	0.161 +0.005 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	MS20426AD5 3			
<p style="text-align: center;">LEGEND</p> <p>1 For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07).</p> <p>2 Part of 74D110325-1001 aircraft structure repair tool kit (A1-F18AC-SRM-200, WP004 16).</p> <p>3 Countersink holes to flushness requirement of fastener to bottom surface of seal retainer.</p>								

Figure 27. Seal Retainer, 74A350817, Fastener Index (Sheet 2)

28. **AFT CORNER SEAL RETAINER, 74A350830, REPLACEMENT.** See figure 28.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, F/A-18B Canopy	RE174350006-1

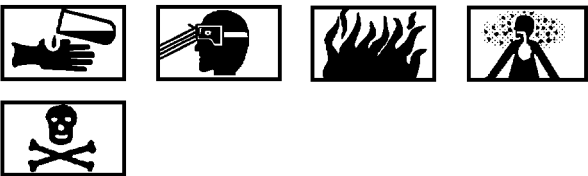
Materials Required

Nomenclature	Specification or Part Number
Barrier Material	MIL-B-131, Class 1
Cheesecloth	CCC-C-440, Type 1, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108
Isopropyl Alcohol	TT-I-735
Sealing Compound	MIL-S-83430, Class A-1/2



To prevent damage to transparency, be sure barrier material is installed between transparency and ethyl foam. See canopy preparation (WP006 01).

- Load canopy into fixture (WP006 01).
- Remove 74A350800 aft transparency (WP006 03).
- Remove 74A3508024 side fairing section from Y283.520 thru Y363.650. See figure 6 for fastener location.
- Remove 12 fasteners securing 74A350830 seal retainer to 74A350823 lower fairing support, 74A350841 intercostals, and 74A350828 forward beam. See figure 28 for fastener location and part location.
- Remove seal retainer.



Isopropyl Alcohol 2

- Clean all residual sealant from area where 74A350830 seal retainer was removed using plastic scraper and cheesecloth moistened with isopropyl alcohol.
 - Locate new 74A350830 seal retainer in X plane location by positioning formed channel inline with existing formed channel in 74A350817 and 74A350816 seal retainers.
 - Locate new 74A350830 seal retainer in Y plane location by maintaining equal gap distance between 74A350817 and 74A350816 seal retainers.
 - Locate new 74A350830 seal retainer in Z plane location by positioning upper surface of seal retainer net with bottom surface of 74A350823 lower fairing support and 74A350841 intercostal.
 - Secure 74A350830 seal retainer to 74A350841 intercostal using C-clamp.
- CAUTION**
- Use care when back drilling not to elongate holes in 74A350823 lower fairing support, 74A350841 intercostal, and 74A350828 forward beam.
- Locate and drill holes in 74A350830 seal retainer using existing holes in 74A350823 lower fairing support, 74A350841 intercostal, and 74A350828 forward beam as guide. See figure 28 for hole diameter and drilling information.
 - Countersink holes in 74A350830 seal retainer to flushness requirement of fastener. See figure 28 for hole locations.
 - Remove C-clamp and 74A350830 seal retainer.
 - Apply finish system to new 74A350830 seal retainer and any other area requiring finish system touchup (A1-F18AC-SRM-500, WP021 00).



Sealing Compound

7

o. Fay surface seal interfacing surfaces on 74A350830 seal retainer, 74A350823 lower fairing support, 74A350841 intercostal, and 74A350828 forward beam. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

p. Wet install fasteners securing 74A350830 seal retainer to 74A350823 lower fairing support, 74A350841 intercostal, and 74A350828 forward beam. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 28.

q. Apply fillet seal to all peripheral joints on pressure side of canopy. Fill all voids and joggles on pressure side which cannot be fay or fillet sealed (A1-F18AC-SRM-200, WP011 00). See figure 28 for sealant location.

r. Reinstall 74A350800 aft transparency (WP006 03).

s. Apply finish system, as required, to repair area (A1-F18AC-SRM-500, WP021 00).

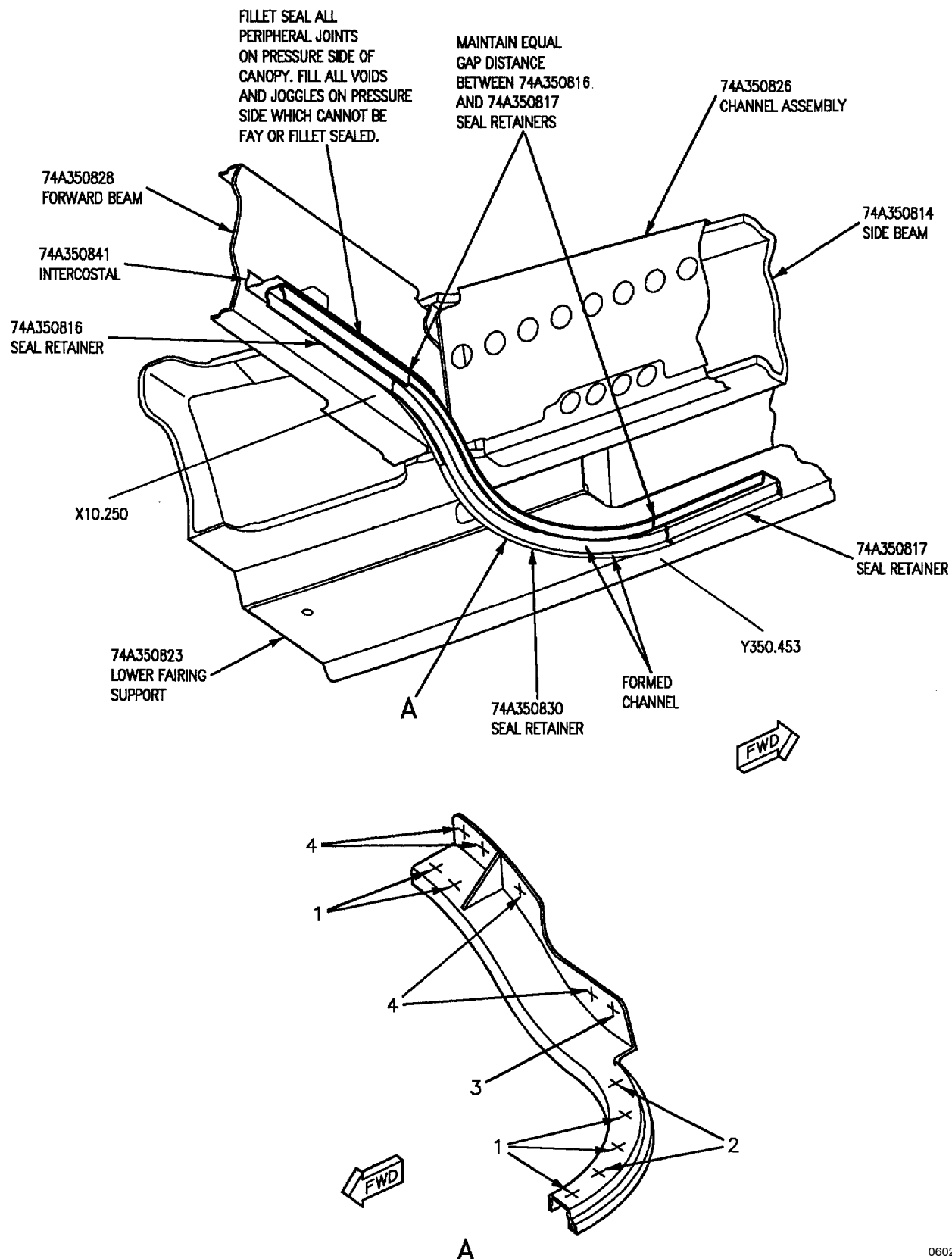


Figure 28. Aft Corner Seal Retainer, 74A350830, Fastener Index (Sheet 1)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 2	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1		5	0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1399D5A2 3			
2		2	0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1399D5A3 3			
3		1	0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1398D5A2			
4		4	0.160 +0.004 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	NAS1398D5A3			
<p style="text-align: center;">LEGEND</p> <p>1 For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07).</p> <p>2 Part of 74D110325-1001 aircraft structure repair tool kit (A1-F18AC-SRM-200, WP004 16).</p> <p>3 Countersink holes to flushness requirement of fastener to bottom surface of seal retainer.</p>								

Figure 28. Aft Corner Seal Retainer, 74A350830, Fastener Index (Sheet 2)

29. **AFT SEAL RETAINER, 74A350816, INSPECTION AND REPLACEMENT.** See figure 29.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, F/A-18B Canopy	RE174350006-1

Materials Required

Nomenclature	Specification or Part Number
Barrier Material	MIL-B-131, Class 1
Cheesecloth	CCC-C-440, Type 1, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108
Isopropyl Alcohol	TT-I-735
Sealing Compound	MIL-S-83430, Class A-1/2



To prevent damage to transparency, be sure barrier material is installed between transparency and ethyl foam. See canopy preparation (WP006 01).

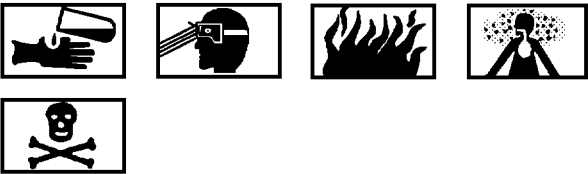
30. **INSPECTION.**

- a. Load canopy into fixture (WP006 01).
- b. Position aft seal beam assembly (detail 70) inline with fixture base (detail 192, 193) and install L-pin (detail 116) four places. See detail A.
- c. Raise aft seal locator (details 275, 349) inside aft seal retainer. See details A and B.
- d. Check 74A350816 seal retainer for correct X, Y, and Z plane location by inserting L-pin (detail 207). See detail B.

e. Replace 74A350816 aft seal retainer if L-pin (detail 207) cannot be inserted or if gap exists between aft seal locator (details 275, 349) and seal retainer.

31. **REPLACEMENT.**

- a. Load canopy into fixture (WP006 01).
- b. Remove 18 fasteners attaching 74A350816 aft seal retainer to 74A350841 intercostal. See detail E for part location. See figure 30 for fastener location.
- c. Remove 74A350816 aft seal retainer.



Isopropyl Alcohol 2

- d. Clean all residual sealant from area where 74A350816 aft seal retainer was removed using plastic scraper and cheesecloth moistened with isopropyl alcohol.
- e. Raise lower fairing support locator (details 332, 334) upward and secure in position with L-pin (detail 176). See detail C.
- f. Raise seal locator pin (details 321, 408, and 465) inside seal retainers and rotate until roll pin (detail 521) points forward or aft. See detail D.
- g. Secure seal locator pin (details 321, 408, and 465) by inserting L-pin (detail 207). See detail D.
- h. Position aft seal between assembly (detail 70) inline with fixture base (detail 192, 193) and install L-pin (detail 116) four places. See detail A.

NOTE

- Make sure 0.500 inch diameter hole in 74A350816 seal retainer is located on same side as 0.500 inch diameter hole in 74A350841 intercostal.
- i. Position new 74A350816 aft seal retainer on aft seal locator (details 275, 349). See detail B.
 - j. Raise aft seal locator (details 275, 349) to locating position and install L-pin (detail 207). See detail B.

k. Locate 74A350816 aft seal retainer in X plane location by moving seal retainer inboard or outboard to maintain an equal gap distance between 74A350830 seal retainers. See detail E.

l. Locate 74A350816 aft seal retainer in Y plane location by moving seal retainer forward or aft until formed channel is aligned with formed channel in 74A350830 seal retainers. See detail E.

m. Locate 74A350816 aft seal retainer in Z plane location by making sure upper surface of seal retainer is net to lower surface of 74A350841 intercostal. See detail B.

n. Secure 74A350816 aft seal retainer in position by engaging clamp (detail 277) four places. See detail B.



Use care when back drilling not to elongate holes in 74A350841 intercostal.

o. Locate and drill holes in 74A350816 aft seal retainer using existing holes in 74A350841 intercostal as guide. See figure 30 for hole diameter and drilling information.

p. Countersink holes in 74A350816 aft seal retainer to flushness requirement of fastener. See figure 30 for hole location.

q. Disengage clamp (detail 277) four places and remove 74A350816 aft seal retainer.

r. Apply finish system as required to new 74A350816 aft seal retainer and any other area requiring finish system touchup (A1-F18AC-SRM-500, WP021 00).



Sealing Compound

7

s. Fay surface seal interfacing surfaces on 74A350816 aft seal retainer and 74A350841 intercostal. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

t. Wet install fasteners securing 74A350816 aft seal retainer to 74A350841 intercostal. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 30.

u. Apply fillet seal to all peripheral joints on pressure side of canopy. Fill all voids and joggles on pressure side which cannot be fay or fillet sealed. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00). See detail E for sealant location.

v. Apply finish system, as required, to repair area (A1-F18AC-SRM-500, WP021 00).

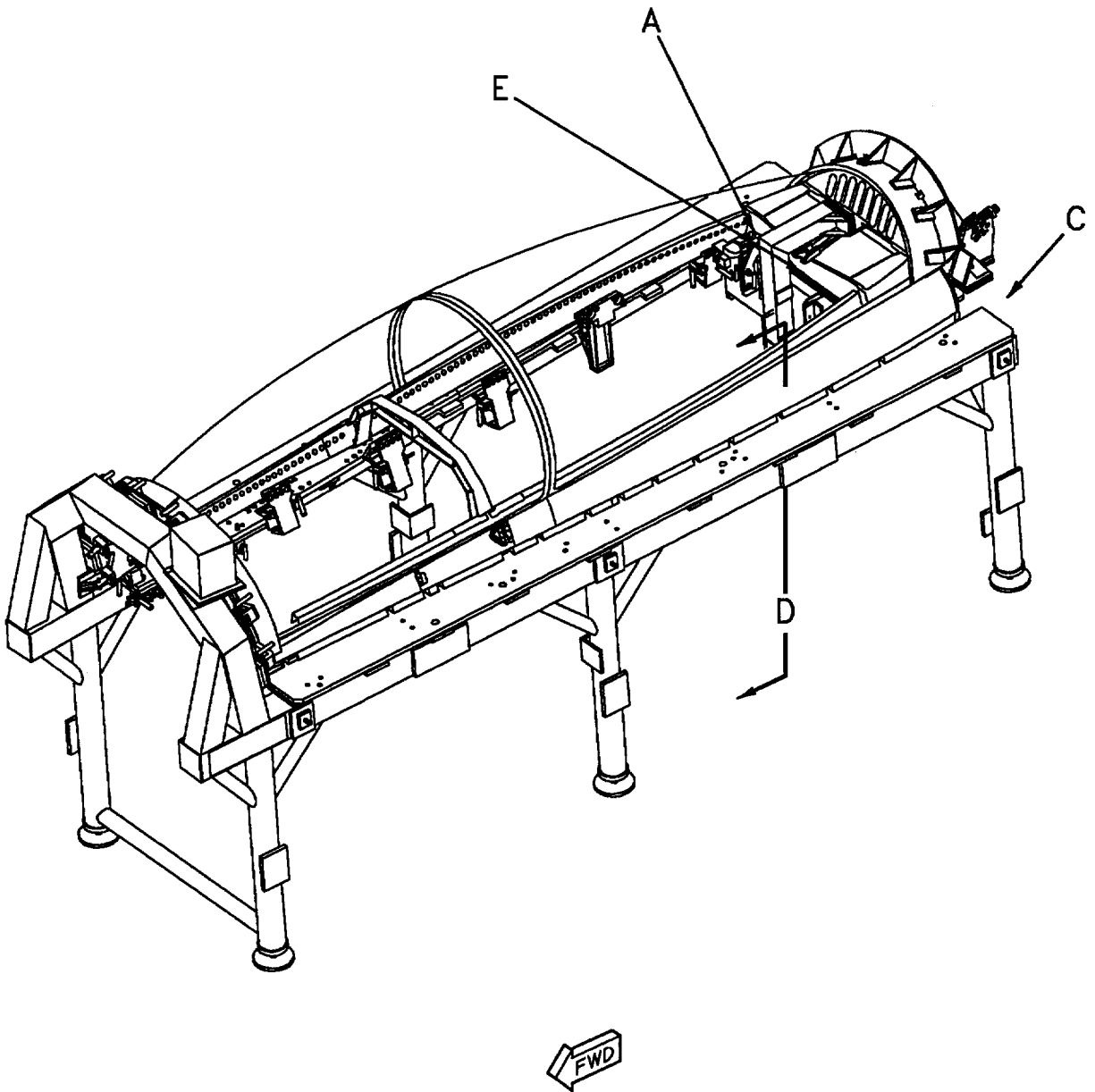


Figure 29. Inspection and Replacement - Aft Seal Retainer (Sheet 1)

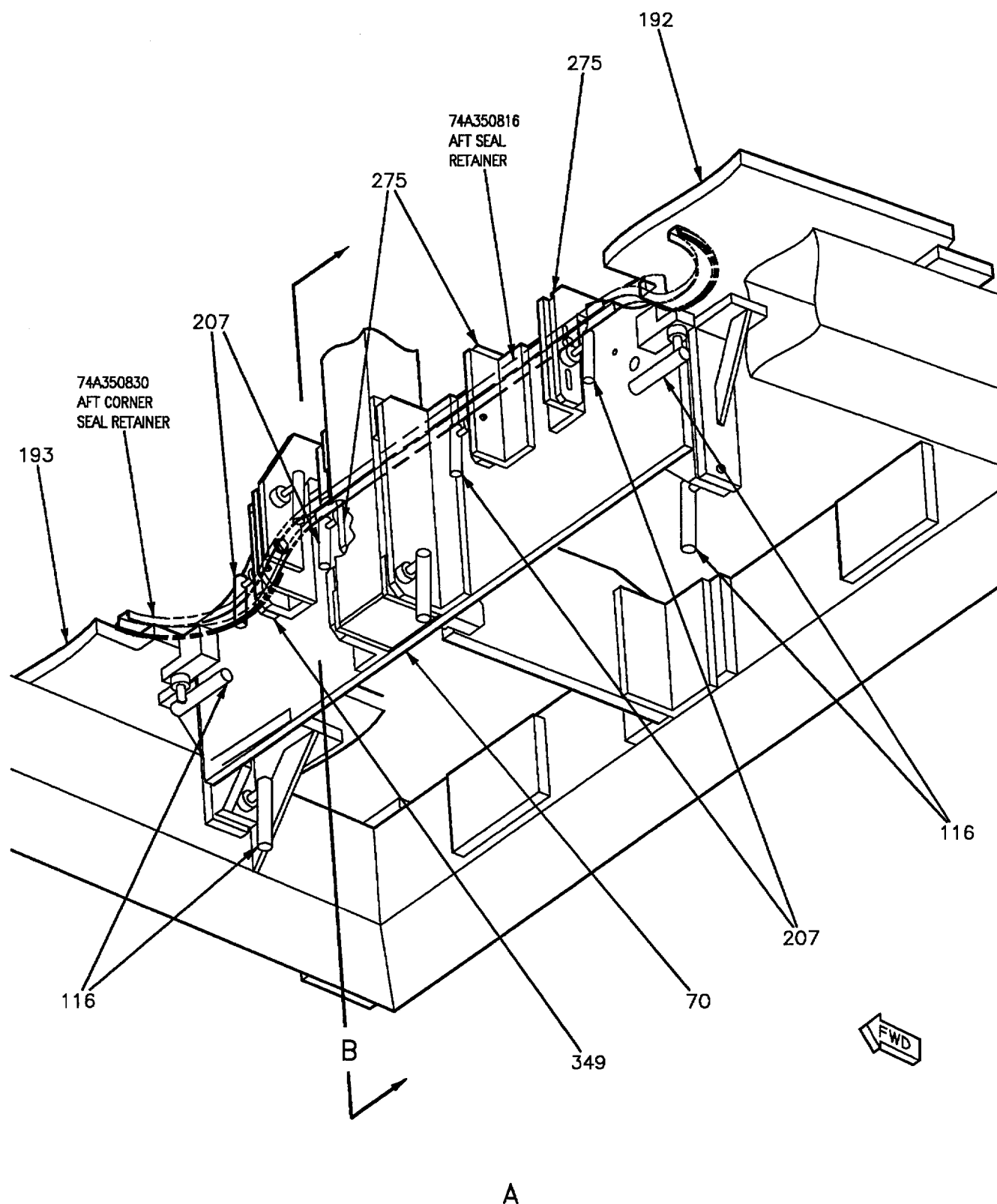
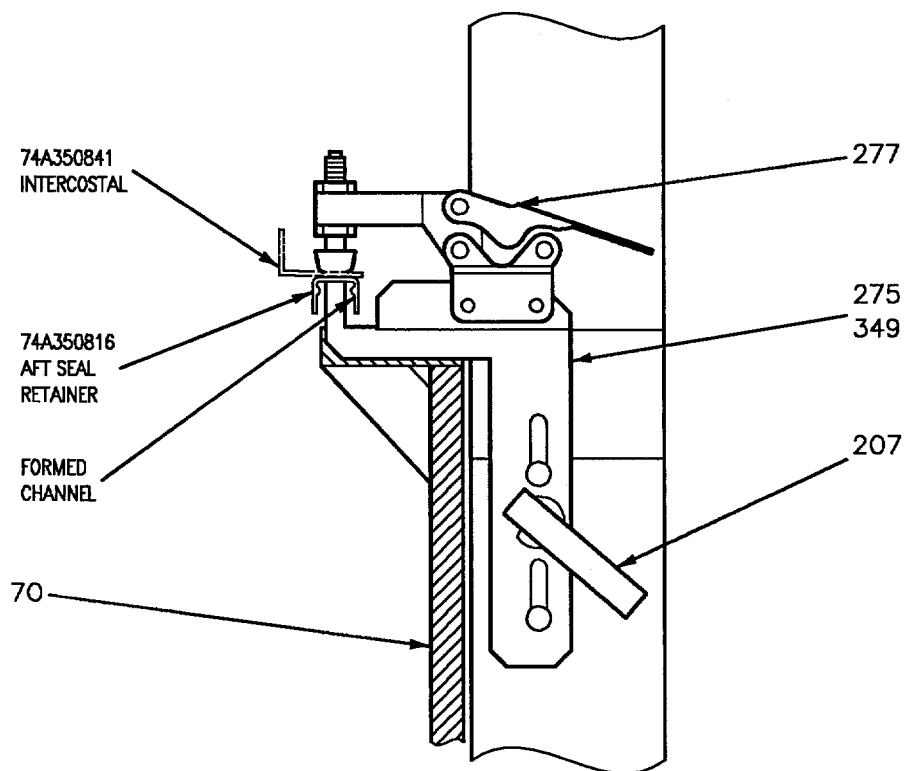
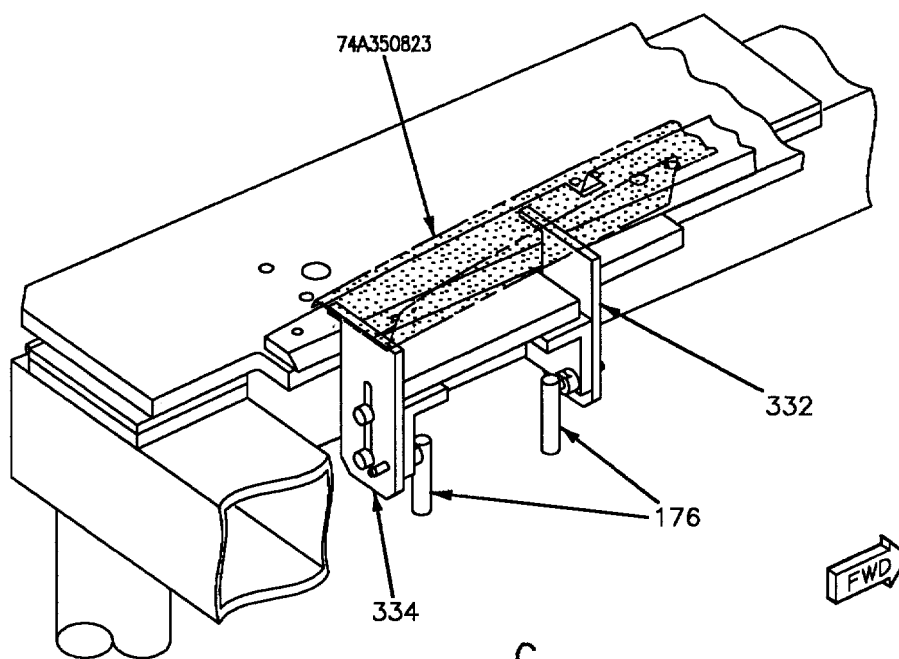


Figure 29. Inspection and Replacement - Aft Seal Retainer (Sheet 2)



B

VIEW LOOKING OUTBOARD



C

LEFT SIDE SHOWN
RIGHT SIDE TYPICAL

Figure 29. Inspection and Replacement - Aft Seal Retainer (Sheet 3)

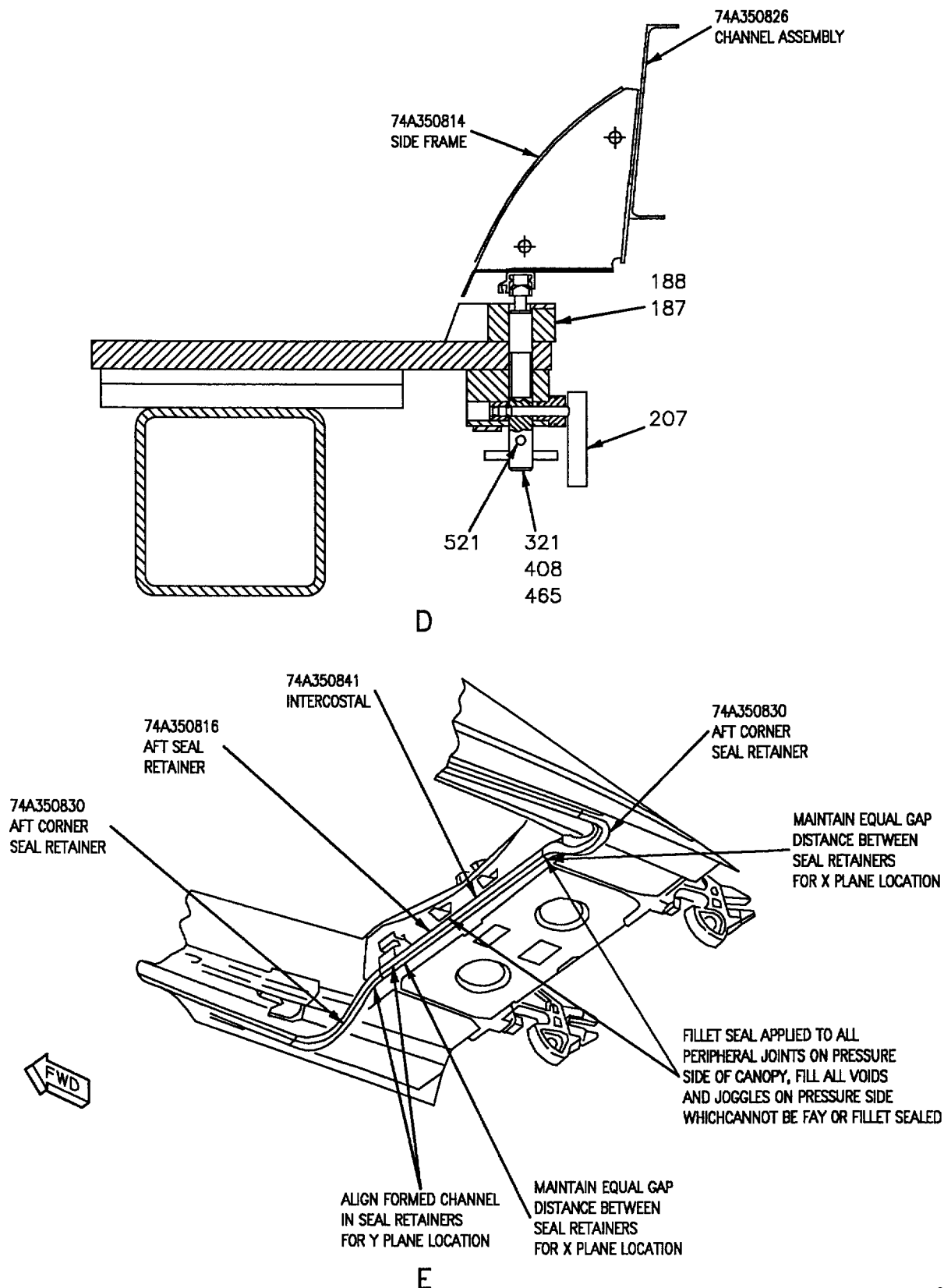
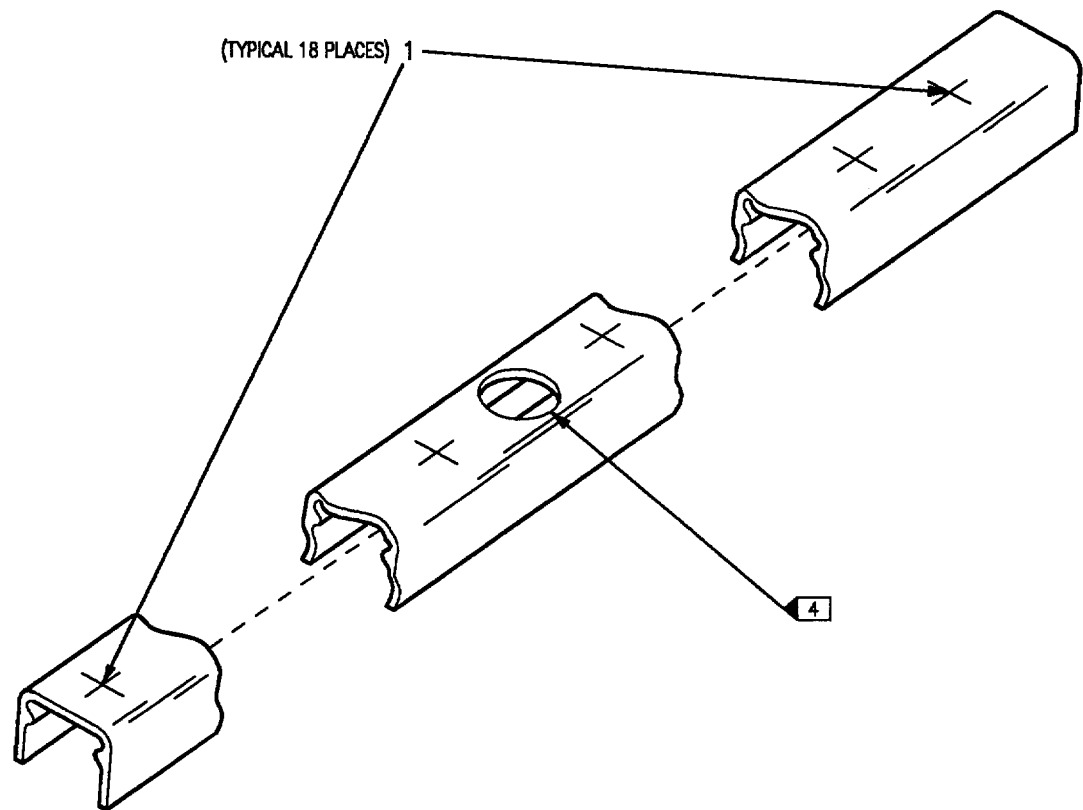


Figure 29. Inspection and Replacement - Aft Seal Retainer (Sheet 4)

DETAIL NO.	NAME	FUNCTION
70	Aft seal beam assembly	Provides a base to mount aft seal locators (detail 275, 349).
116	L-pin	Locates aft seal locators (detail 275, 349) in X, Y, and Z plane location.
176	L-pin	Locates lower fairing support locators (detail 332, 334) in position.
192, 193	Fixture base	Base to which most locators mount.
207	L-pin	Secures seal locator pin (details 321, 408, and 465) in locating position.
275, 349	Aft seal locator	Locates 74A350816 aft seal retainer in X, Y, and Z plane location.
277	Clamp	Secures 74A350816 aft seal retainer to aft seal locator (detail 275, 349).
321	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location.
332,334	Lower fairing support locators	Provides Z plane location at Y363.650.
408	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y283.488.
465	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y266.565, Y287.073, Y295.840, Y303.326, Y308.073, Y315.586, Y323.585, Y331.084, Y341.328, Y342.076, and Y350.452.
521	Roll pin	Used as a directional indicator to determine position of locator pin (details 321, 408, and 465)

Figure 29. Inspection and Replacement - Aft Seal Retainer (Sheet 5)



06023001

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 2	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1		18	0.161 +0.005 -0.000	T.F.I.M.25.0201080 0.1610 DRILL	MS20426AD5 3			
LEGEND								
1 For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07).								
2 Part of 74D110325-1001 aircraft structure repair tool kit (A1-F18AC-SRM-200, WP004 16).								
3 Countersink holes to flushness requirement of fastener to bottom surface of seal retainer.								
4 Hole diameter is 0.500 +0.007 -0.000.								

Figure 30. Aft Seal Retainer, 74A350816, Fastener Index

32. CROSS BEAM, 74A350860, RE-PLACEMENT. See figure 31.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, F/A-18B Canopy	RE174350006-1

Materials Required

Nomenclature	Specification or Part Number
Barrier Material	MIL-B-131, Class 1
Cheesecloth	CCC-C-440, Type 1, Class 1
Clip	74A350866-1001 7075-T6 Alclad 0.063 x 1.40 x 2.47
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108
Isopropyl Alcohol	TT-I-735
Sealing Compound	MIL-S-83430, Class A-1/2
Shim	74A350866-2011 5052-H39 Alum Lam 0.048 x 1.02 x 1.48
Shim	74A350866-2013 5052-H39 Alum Lam 0.048 x 3.42 x 3.62
Shim	74A350866-2015 5052-H39 Alum Lam 0.094 x 0.90 x 2.88



To prevent damage to transparency, be sure barrier material is installed between transparency and ethyl foam. See canopy preparation (WP006 01).

a. Load canopy into fixture (WP006 01).

b. Remove 74A350800 forward and aft transparency (WP006 03).

c. Remove 74A350865 cover, door 85 (A1-F18AC-LMM-010).

d. Remove canopy jettison rocket motor (A1-F18AC-120-300, WP067 00).

e. Remove four ST3M748AD4 rivets attaching 74A350824 fairing angle to 74A350814 side frame.

f. Remove fasteners attaching forward section of 74A350826 channel angles to 74A350814 side frame and 74A350860 cross beam from Y274.400 thru Y278.420. See figure 9 for fastener location.

g. Remove fasteners attaching aft section of 74A350826 channel angles to 74A350860 cross beam at Y282.246. See figure 9 for fastener location.

h. Remove fasteners attaching 74A350823 lower fairing support to 74A350861 aft rocket motor support, 74A350814 side frame, and 74A350860 cross beam. See figure 11 for fastener location.

NOTE

When removing 74A350861 aft rocket motor support, keep 74A350866 shims or note shim thickness for use in installation.

i. Remove fasteners attaching 74A350861 aft rocket motor support to 74A350814 side frame and 74A350860 cross beam. See figure 13 for fastener location.

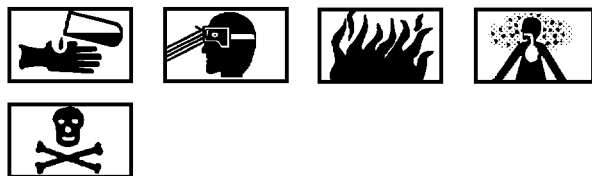
NOTE

When removing 74A350814 side frame, keep 74A350847 shims or note shim thickness for use in installation.

j. Remove fasteners attaching 74A350814 side frame to 74A350801 arch, 74A350815 aft beam splice plate, 74A350828 forward beam, 74A350834 canopy deck plate, and 74A350835 hinge arm.

k. Move 74A350814 side frame outboard until 74A350860 cross beam can be removed.

l. Remove 74A350860 cross beam and 74A350866 shim from repair area.



Isopropyl Alcohol

2

m. Clean all residual sealant from area where 74A350860 cross beam was removed using plastic scraper and cheesecloth moistened with isopropyl alcohol.

n. Position cross beam support (detail 19) inline with fixture base angles (detail 20, 21) and install L-pin (detail 554) four places. See detail A.

NOTE

Install A-frame (subassembly B) with handle (detail 174) facing forward.

o. Position A-frame (subassembly B) inline with fixture base angles (detail 22, 23) and cross beam support (detail 19). See detail A.

p. Secure A-frame (subassembly B) by installing L-pins (detail 175) seven places and handknob (detail 251) four places. See detail A.

q. Position cross beam locator (assembly E) inline with holes in A-frame mounting angle (detail 169, 170). See detail A.

r. Secure cross beam locator (subassembly E) by installing L-pins (detail 439) and handknobs (detail 422) four places. See detail B.

s. Raise lower fairing support locator (detail 332, 334) to locating position and install L-pin (detail 176). See detail C.

t. Raise seal locator pin (details 321, 408, and 465) inside seal retainers and rotate until roll pin (detail 521) points forward or aft. See detail D.

u. Secure seal locator pin (details 321, 408, and 465) by inserting L-pin (detail 207). See detail D.

v. Position new 74A350866 shims and 74A350860 cross beam into channel section of 74A350814 side frame. See detail D for shim locations.

w. Position 74A350847 shims and 74A350814 side frame inline with mating structure.

x. Install temporary fasteners and C-clamp to hold 74A350814 side frame in correct position.

y. Locate new 74A350860 cross beam in X and Z plane location by installing L-pin (detail 436) on left side and L-pin (detail 434) on right side. See detail A.

z. Locate new 74A350860 cross beam in Y plane location by positioning aft surface of cross beam net with forward surfaces of center locator (detail 433) and L/R angle locators (detail 431). See detail A.



Use care when back drilling not to elongate holes in 74A350814 side frame.

aa. Locate and drill holes in 74A350866 shims and 74A350860 cross beam using existing holes in 74A350814 side frame as guide. See figure 32 for hole diameter and drilling information.

ab. Install forward and aft sections of 74A350826 channel angle using temporary fasteners.

ac. Locate and drill holes in 74A350860 cross beam flange using existing holes in 74A350826 channel angle as guide. See figure 32 for hole diameter and drilling information.

ad. Remove temporary fasteners and C-clamps.

ae. Remove 74A350826 channel angles.

af. Move 74A350814 side frame outboard until 74A350860 cross beam can be removed.

ag. Remove 74A350860 cross beam and 74A350866 shim from repair area.

NOTE

If 74A350866-1001 plate is not damaged, salvage from old cross beam.

ah. Locate holes for fasteners attaching 74A350866-1001 clip, ST3M719C4M1 plate nut, and 3M448C4M8-2 or 3M448C4M6-3 gang channel. See figure 32 for hole diameters and drilling information.

ai. Apply finish system as required to new 74A350860 cross beam and any other area requiring finish system touchup (A1-F18AC-SRM-500, WP021 00).



Sealing Compound

7

aj. Fay surface seal interfacing surfaces on 74A350860 cross beam and 74A350866-1001 clip. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

ak. Wet install fasteners attaching 74A350866-2001 plate, ST3M719C4M1 plate nut, and 3M448C4M8-2 gang channel to 74A350860 cross beam. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 32.

al. Fay surface seal interfacing surfaces on 74A350860 cross beam and 74A350814 side frame. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

am. Position 74A350860 cross beam inline with 74A350814 side frame.

an. Wet install fasteners attaching 74A350847 shims and 74A350814 side frame to 74A350801 arch, 74A350815 aft beam splice plate, 74A350828 forward beam, 74A350834 canopy deck plate, and 74A350835 hinge arm.

ao. Wet install fasteners attaching 74A350866 shims and 74A350861 aft rocket motor support to 74A350814 side frame and 74A350860 cross beam. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 13.

ap. Wet install fasteners attaching 74A350823 lower fairing support to 74A350861 aft rocket motor support, 74A350814 side frame, and 74A350860 cross beam. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 11.

aq. Wet install fasteners attaching the forward and aft sections of 74A350826 channel angles to 74A350814 side frame and 74A350860 cross beam. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 9.

ar. Wet install four ST3M748AD4 rivets attaching 74A350824 fairing angle to 74A350814 side frame.

as. Apply fillet seal to all peripheral joints on pressure side of canopy. Fill all voids and joggles on pressure side which cannot be fay or fillet sealed. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

at. Reinstall canopy jettison rocket motor (A1-F18AC-120-300, WP067 00).

au. Reinstall 74A350865 cover, door 85 (A1-F18AC-LMM-010).

av. Reinstall 74A350800 forward and aft transparency (WP006 03).

aw. Apply finish system, as required, to repair area (A1-F18AC-SRM-500, WP021 00).

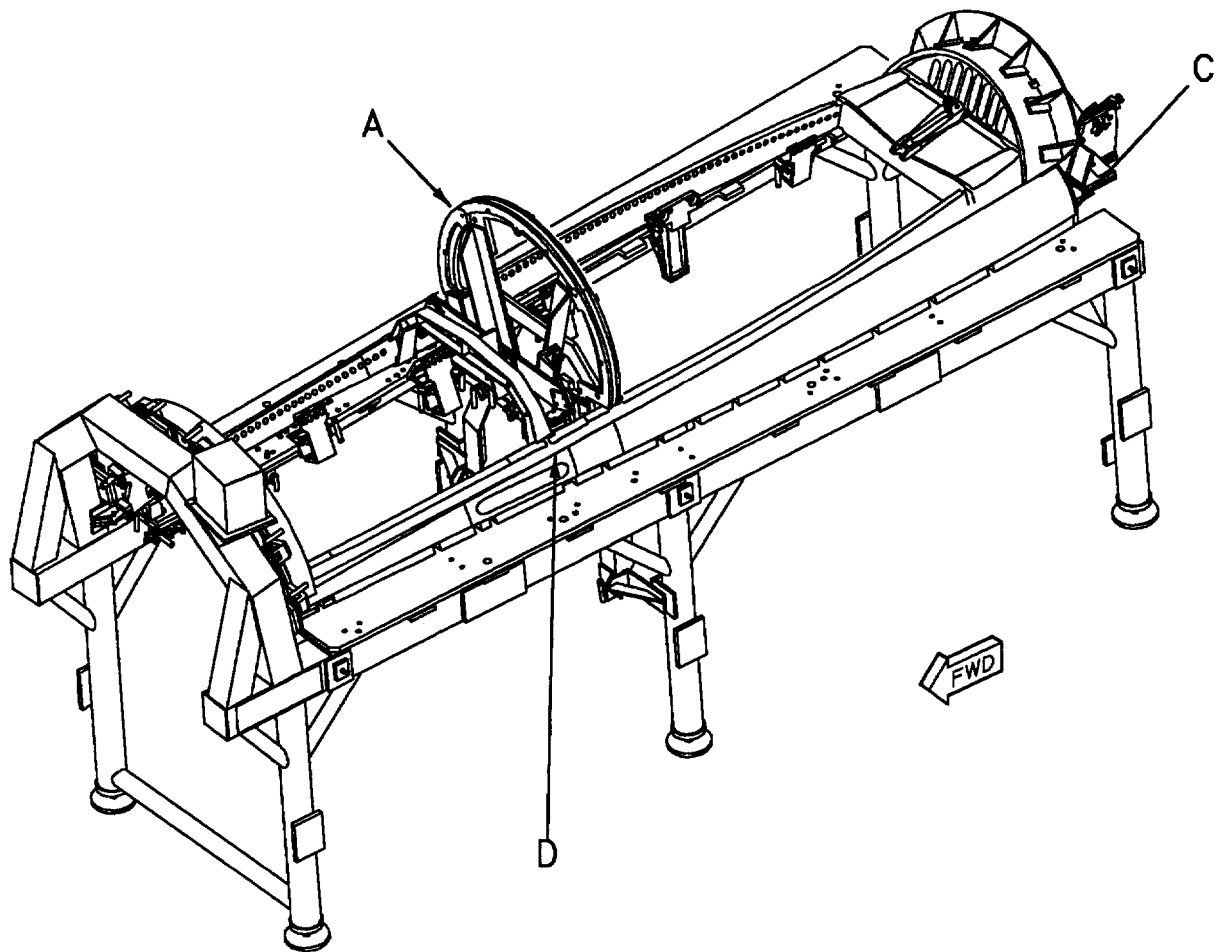
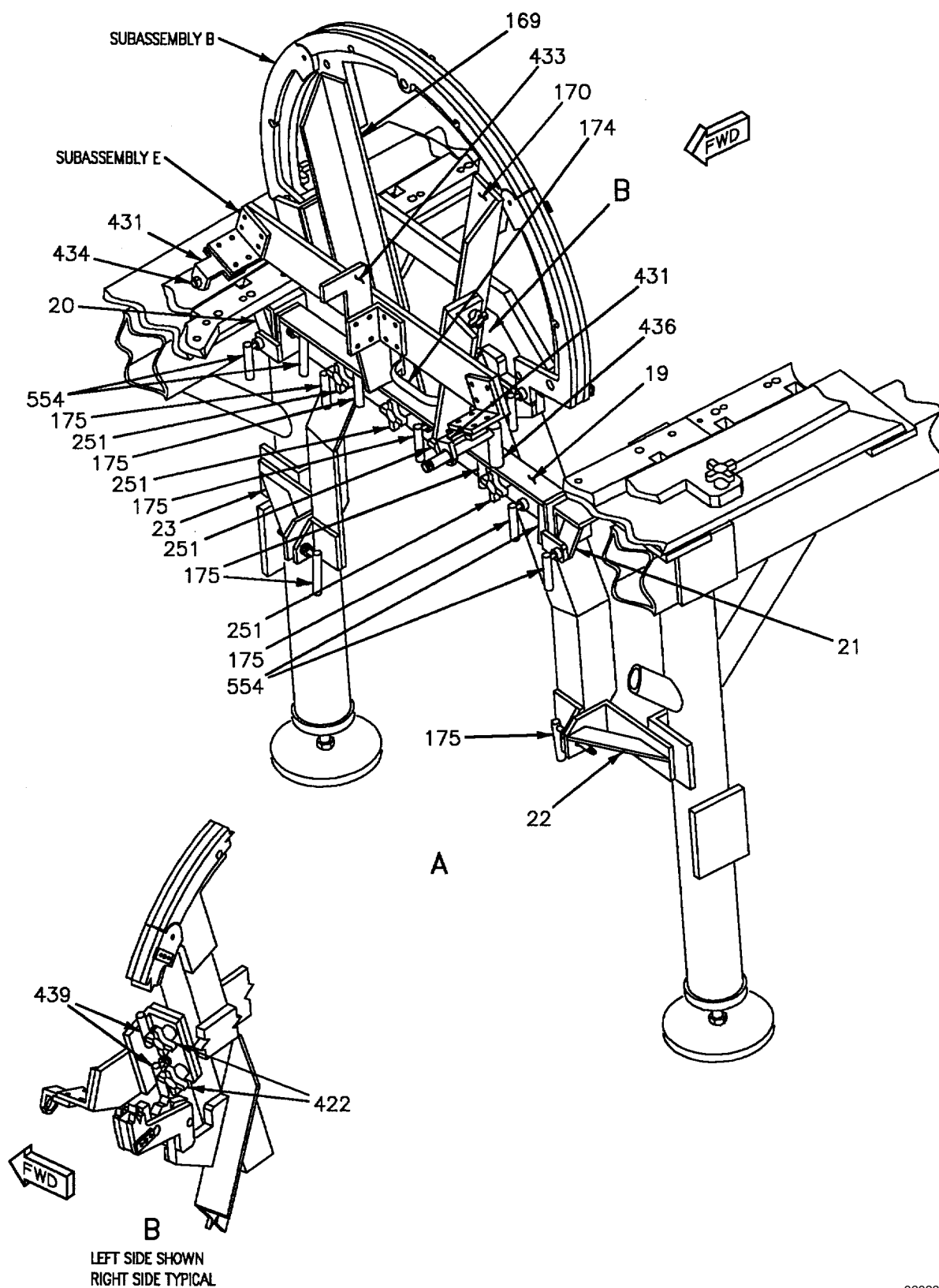


Figure 31. Replacement - Cross Beam (Sheet 1)



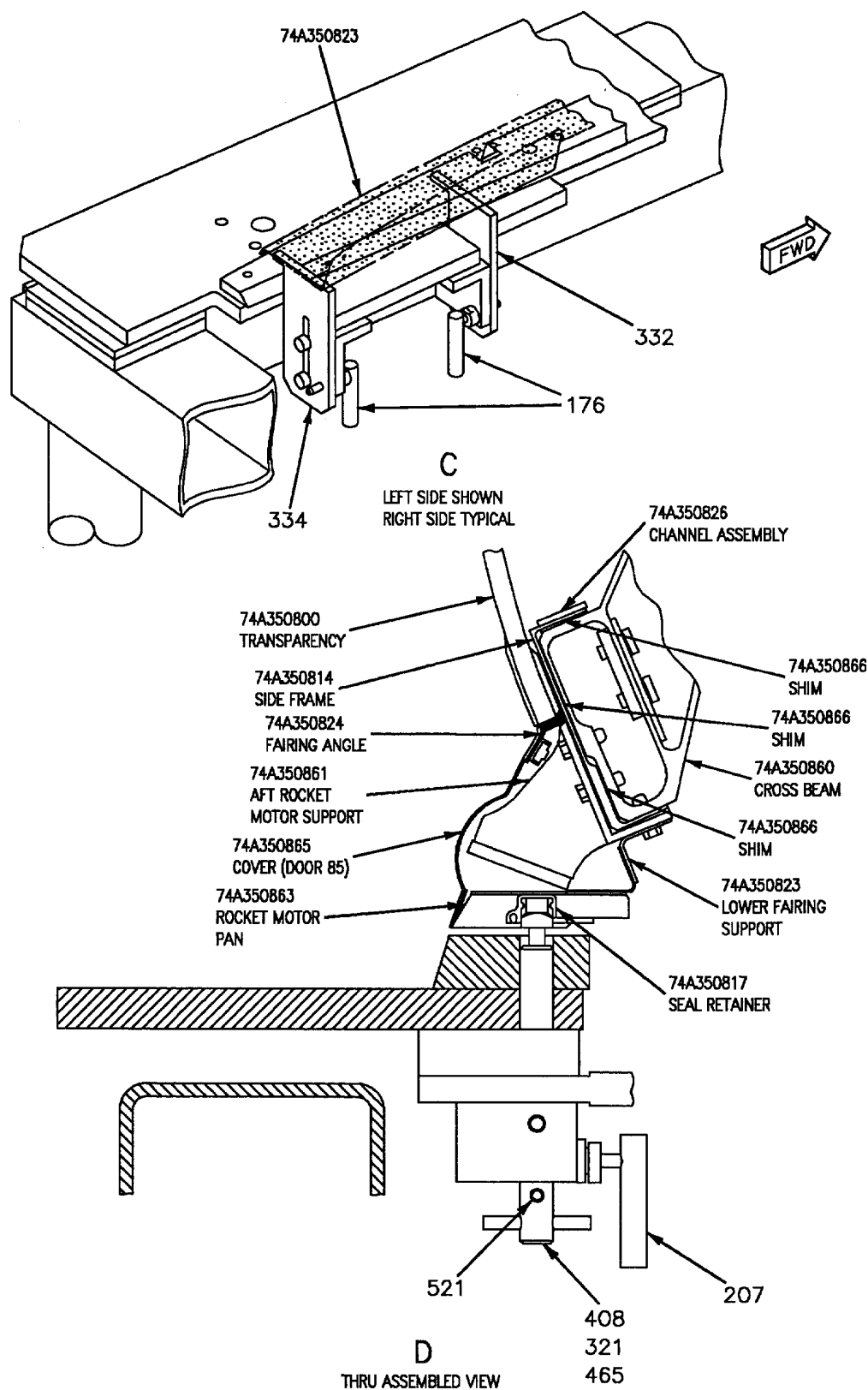


Figure 31. Replacement - Cross Beam (Sheet 3)

DETAIL NO.	NAME	FUNCTION
Subassembly B	A-frame	Assembly made up of various details for use in supporting cross beam locator (subassembly E).
Subassembly E	Cross beam locator	Assembly made up of various details for use in locating 74A350860 cross beam in X, Y, and Z plane location.
19	Cross beam support	Structural support used to locate and secure A-frame (subassembly B).
20, 21	Fixture base angles	Locates and secures cross beam support (detail 19).
22, 23	Fixture base angles	Locates and secures lower legs of A-frame (subassembly B).
169, 170	A-frame mounting angles	Locates and secures cross beam locator (subassembly E).
174	Handle	Used as a lifting device to position A-frame (subassembly B) in correct location.
175	L-pin	Used to align A-frame (subassembly B) to fixture base angles (detail 22, 23) and cross beam support (detail 19).
176	L-pin	Locates lower fairing support locators (detail 332, 334) in locating position.
207	L-pin	Secures seal locator pin (details 321, 408, and 465) in locating position.
251	Handknob	Secures A-frame (subassembly B) in locating position.
321	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location.
332, 334	Lower fairing support locators	Provides Z plane location at Y363.650.
408	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y283.488.
422	Handknob	Secures cross beam locator (subassembly E) to A-frame mounting angle (detail 169, 170).
431	Angle locators	Used as a reference plane when locating 74A350860 cross beam in Y plane location.
433	Center locator	Used as a reference plane when locating 74A350860 cross beam in Y plane location.
434	L-pin	Locates right side of 74A350860 cross beam in X and Z plane location.

Figure 31. Replacement - Cross Beam (Sheet 4)

DETAIL NO.	NAME	FUNCTION
436	L-pin	Locates left side of 74A350860 cross beam in X and Z plane location.
439	L-pin	Secures cross beam locator (subassembly E) to A-frame mounting angle (detail 169, 170).
465	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y266.565, Y287.073, Y295.840, Y303.326, Y308.073, Y315.586, Y323.585, Y331.084, Y341.328, Y342.076, and Y350.452.
521	Roll pin	Used as a directional indicator to determine position of locator pin (details 321, 408, and 465).
554	L-pin	Secures cross beam support (detail 19) in correct position.

Figure 31. Replacement - Cross Beam (Sheet 5)

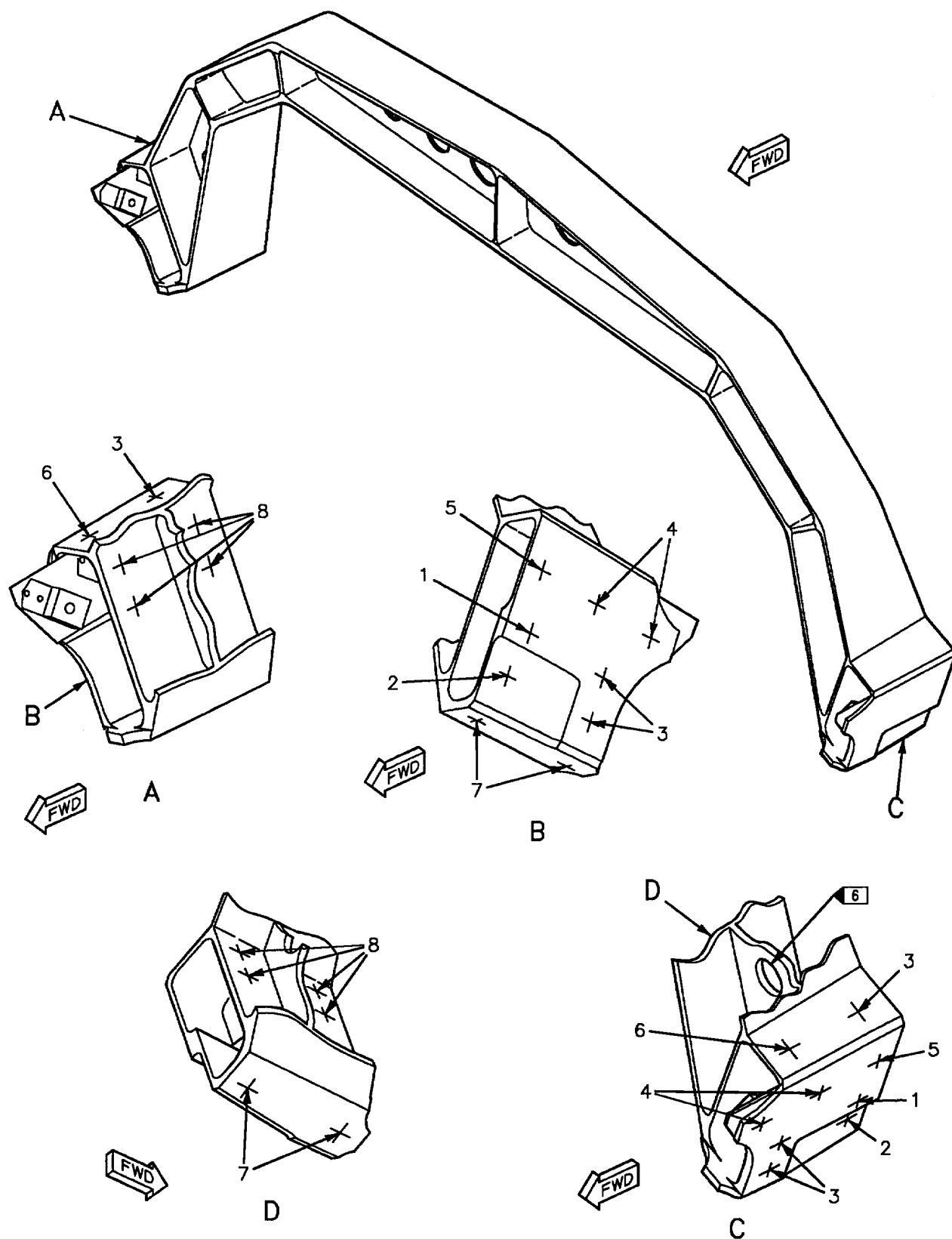


Figure 32. Cross Beam, 74A350860, Fastener Index (Sheet 1)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 2	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1		1	0.260 +0.003 -0.000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0201136 0.2460 DRILL T.F.I.M.25.1162602 0.2602 REAMER	NAS1671-4L9			
2		1	0.260 +0.003 -0.000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0201136 0.2460 DRILL T.F.I.M.25.1162602 0.2602 REAMER	NAS1671-4L10			
3		3	0.260 +0.003 -0.000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0201136 0.2460 DRILL T.F.I.M.25.1162602 0.2602 REAMER	NAS1671-4L7			
4		2	0.255 +0.007 -0.000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0204394 0.2559 DRILL	NAS664V12HT			ST3M542-4A1 3
5		1	0.255 +0.007 -0.000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0204394 0.2559 DRILL	NAS664V12HT			ST3M719C4M1 4
6		1	0.260 +0.003 -0.000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0201136 0.2460 DRILL T.F.I.M.25.1162602 0.2602 REAMER	NAS1671-4L6			
7		2	0.260 +0.003 -0.000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0201136 0.2460 DRILL T.F.I.M.25.1162602 0.2602 REAMER	NAS1671-4L8			
8		4	0.250 +0.006 -0.000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0204156 0.2500 DRILL	NAS654V4	AN960JD41 6L		3M448C4M8-2 5

LEGEND

- 1 For oversize repair fasteners see (A1-F18AC-SRM-200, WP004 07).
- 2 Part of 74D110325-1001 aircraft structure repair tool kit (A1-F18AC-SRM-200, WP004 16).
- 3 Plate nut attached to 74A350866 clip using MS20426AD3 rivets. 74A350866 clip attached to 74A350860 cross beam using MS20426AD3 rivets. Hole diameter for rivets is 0.098 +0.005 -0.000. Countersink holes to flushness requirements of fasteners.

Figure 32. Cross Beam, 74A350860, Fastener Index (Sheet 2)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 2	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
4			Plate nut attached to 74A350860 cross beam using MS20426AD3 rivets. Hole diameter for rivets is 0.098 +0.005 -0.000. Countersink holes in cross beam to flushness requirement of fastener.					
5			Gang channel attached to 74A350860 cross beam using MS20426AD4 rivets. Hole diameter for rivet is 0.128 +0.006 -0.000. Countersink hole in cross beam to flushness requirement of fastener.					
6			Hole diameter is 0.750 inch.					

Figure 32. Cross Beam, 74A350860, Fastener Index (Sheet 3)

33. **LATCH NO. 2, 74A350804, RE-PLACEMENT.** See figure 33.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, F/A-18B Canopy	RE174350006-1
Repair Kit, Canopy	RE274350006-1
Torque Wrench, 5 to 150 Inch Pounds	-

Materials Required

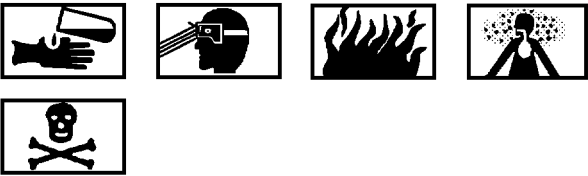
Nomenclature	Specification or Part Number
Barrier Material	MIL-B-131, Class 1
Cheesecloth	CCC-C-440, Type 1, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108
Isopropyl Alcohol	TT-I-735
Peel Shim,	74A350747-2001 5052-H39 Alum Lam 0.094x1.10x4.10
Sealing Compound	MIL-S-22473, Grade AA



To prevent damage to transparency, be sure barrier material is installed between transparency and ethyl foam. See canopy preparation (WP006 01).

34. REMOVAL.

- Load canopy into fixture (WP006 01).
- Remove four bolts attaching 74A350804 latch to 74A350814 side frame. See figure 34 for fastener and part location.
- Remove 74A350804 latch, 74A350706 plate, and 74A350747 shims from 74A350814 side frame.



- Isopropyl Alcohol 2
- Clean area where latch was removed using clean cheesecloth moistened with isopropyl alcohol.

35. INSTALLATION.

- Raise lower fairing support locator (detail 332, 334) to locating position and install L-pin (detail 176). See detail A.
- Raise seal locator pin (details 321, 408, and 465) inside seal retainers and rotate until roll pin (detail 521) points forward or aft. See detail B.
- Secure seal locator pin (details 321, 408, and 465) by inserting L-pin (detail 207). See detail B.

NOTE

If drilling latch attach holes in new 74A350814 side frame, do steps below. If installing new latch to existing 74A350814 side frame, go to step g.

- Locate and drill latch attach holes in new 74A350814 side frame per steps below:

- Install clamp half (detail 236) onto rigging pad (detail 35, 36) and secure with thumbscrew (detail 39). See detail C.
- Install clamp half (detail 42) over flange of 74A350814 side frame and secure to clamp half (detail 236) using thumbscrew (detail 39). See detail C.
- Rotate drill blanket (detail 40, 41) in position and secure by installing L-pin (detail 247). See detail C.
- At hole location 753 thru 756, left side, and 757 thru 760, right side:
 - Install traveler bushing (detail B1) in drill bushing (detail 519). See detail C.



Do not drill into 74A350818 latch housing.

(b) Drill 0.255 +0.007 -0.000 inch diameter hole in 74A350814 side frame. See figure 34 for drilling information.

e. Remove L-pin (detail 247) and retract drill blanket (detail 40, 41). See detail C.

f. Loosen thumbscrew (details 39) and remove clamp half (details 42 and 236) from rigging pad (detail 35, 36). See detail C.

g. Apply finish system to new 74A350804 latch, 74A350706 plates, and any other area requiring finish system touchup (A1-F18AC-SRM-500, WP021 00).

h. Install new 74A350804 latch per steps below:

(1) Position latch locator (detail 234) onto rigging pad (detail 35, 36) and secure with thumbscrew (detail 39). See detail D.

NOTE

Use of 74A350747 peel shims are optional and are installed only when needed to get correct fit of mating parts.

(2) Insert feeler gage between latch locator (detail 234) and outboard surface of 74A350814 side frame to determine thickness of 74A350747 peel shim. See detail E.

NOTE

Nominal gap is 0.094 inch.

(3) Peel 74A350747 shim to fit gap.

(4) Remove latch locator (detail 234).

(5) Position 74A350747 peel shims, 74A350706 plate, and 74A350804 latch inline with holes in 74A350814 side frame. Install bolt and washer into gang channel. See figure 34 for fastener information.

(6) Position latch locator (detail 239) onto rigging pad (detail 35, 36) by inserting L-pin (detail 426). See detail F.

NOTE

With L-pin (detail 426) installed, latch locator (detail 239) is located at 0.150 inch nominal dimension at 70° F. Temperatures above or below 70° F, remove L-pin (detail 426) and adjust latch locator (detail 239) to correspond with correction dimension on chart (detail 467). See detail H.

(7) Determine ambient temperature and select corresponding correction dimension from chart (detail 467). Adjust latch locator (detail 239) using feeler gage and secure with thumbscrew (detail 39). See detail F and H.

NOTE

Ambient temperature measurement is taken from lower surface of latch locator (detail 239) and upper surface of locator pin (detail 469). See detail G.

(8) Adjust 74A350804 latch in 74A350706 serrated plate until latch contacts locator dowel (detail 235). See detail G.

NOTE

Latch serrations are 0.031 inch between centers. Serrations in latch and plate must engage each other.

(9) Latch locator (detail 239) may be adjusted up or down a maximum of 0.016 inch from initial setting to engage latch and plate serrations.

(10) Check for 0.100 inch nominal gap between inboard surface of 74A350804 latch and outboard surface of latch locator (detail 239). Add 74A350747 peel shims, as required, to maintain 0.100 inch nominal gap. See detail G.



Sealing Compound

24

(11) Apply sealing compound to fastener threads and torque to 50-70 inch pounds (QA). See figure 34 for fastener information.

i. Apply finish system, as required, to repair area (A1-F18AC-SRM-500, WP021 00).

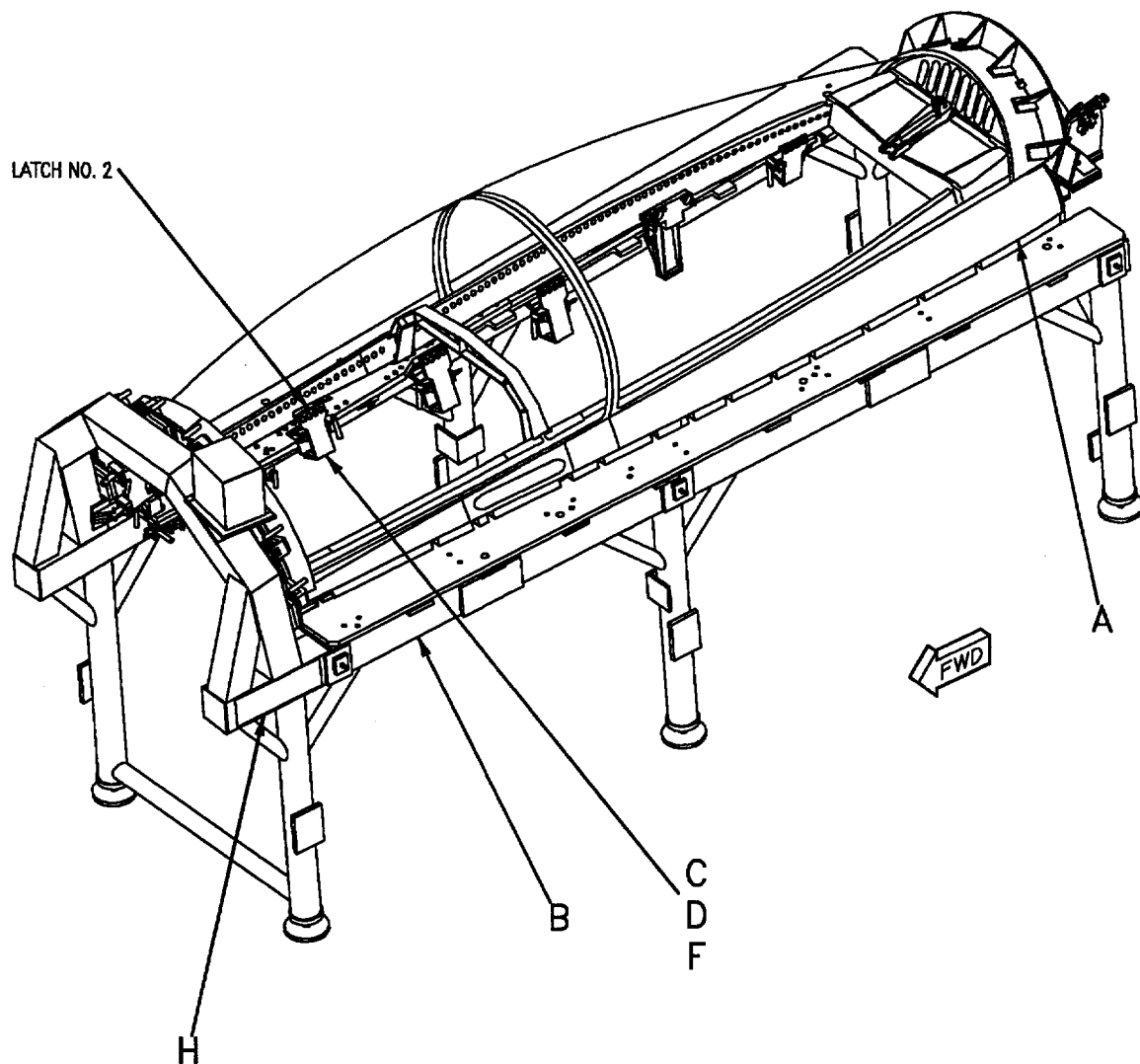


Figure 33. Replacement - Latch No. 2 (Sheet 1)

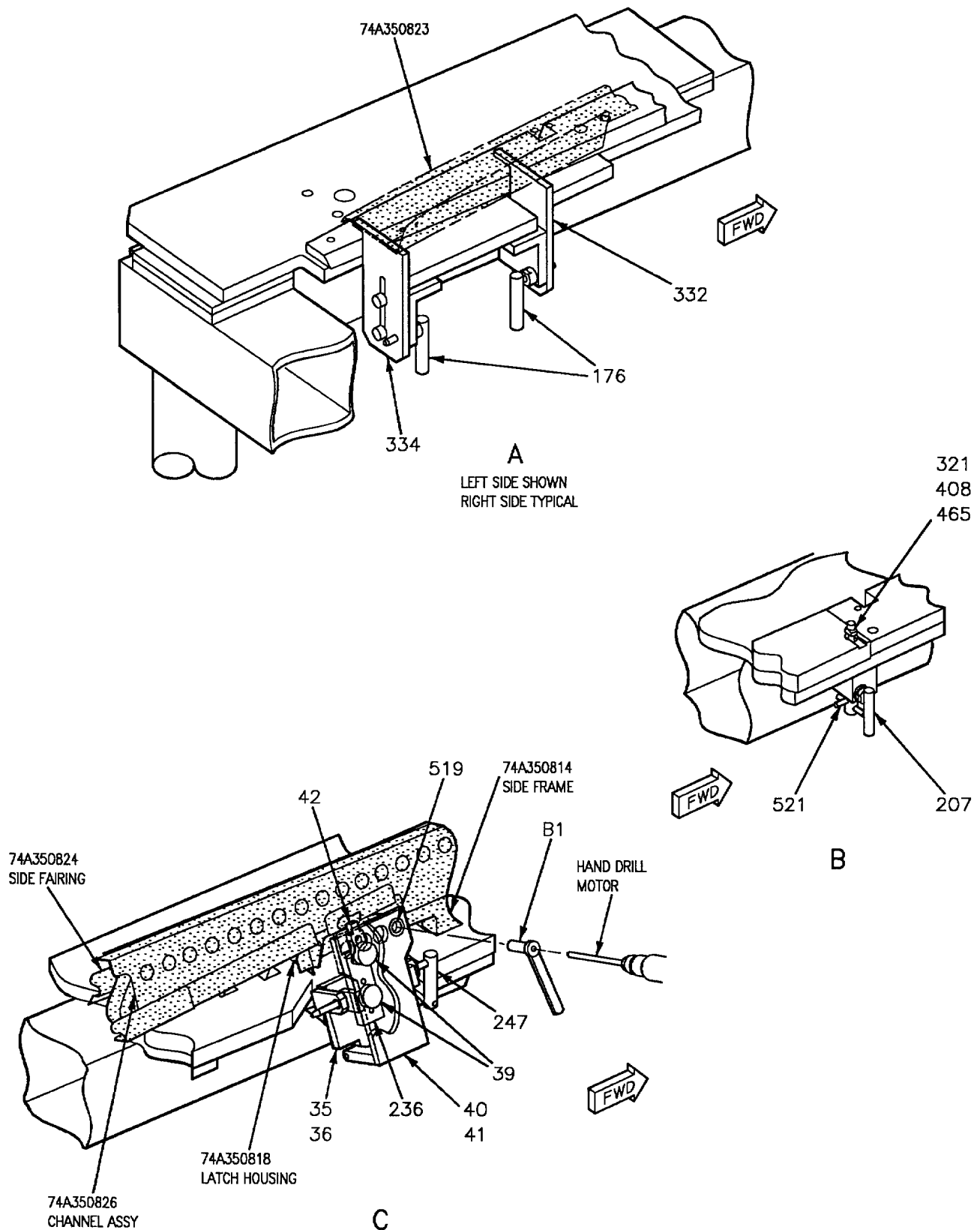


Figure 33. Replacement - Latch No. 2 (Sheet 2)

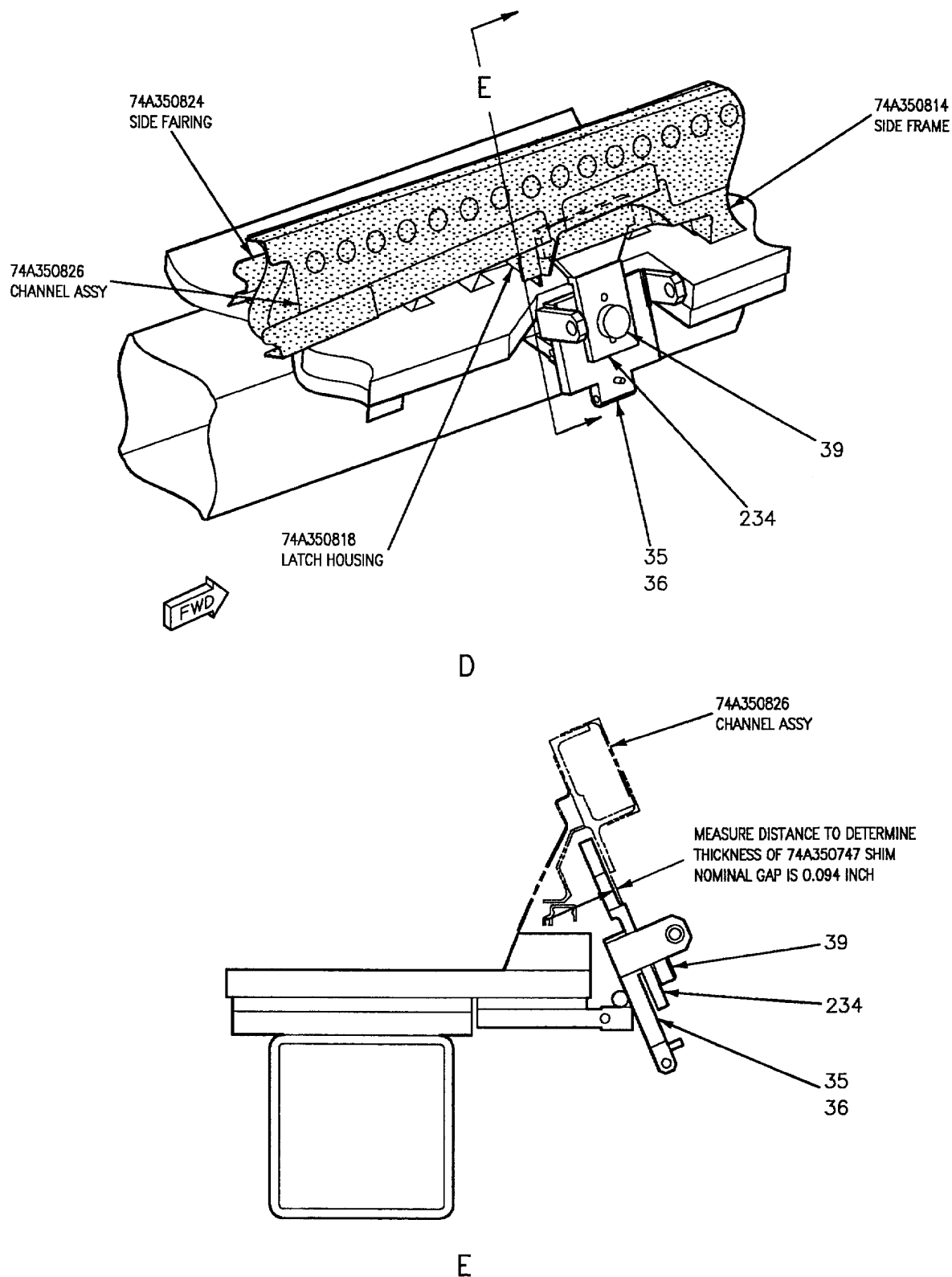


Figure 33. Replacement - Latch No. 2 (Sheet 3)

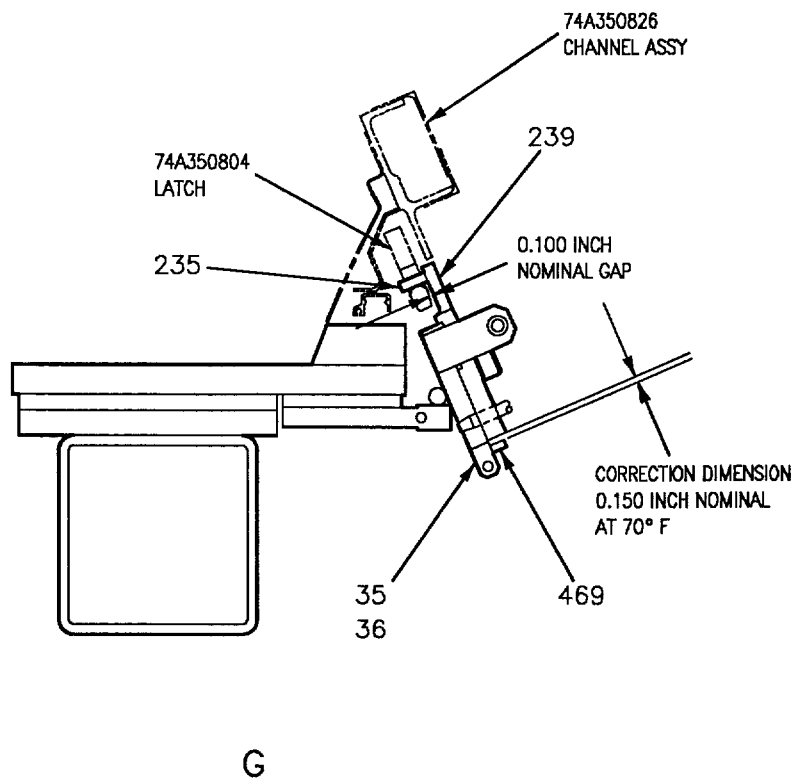
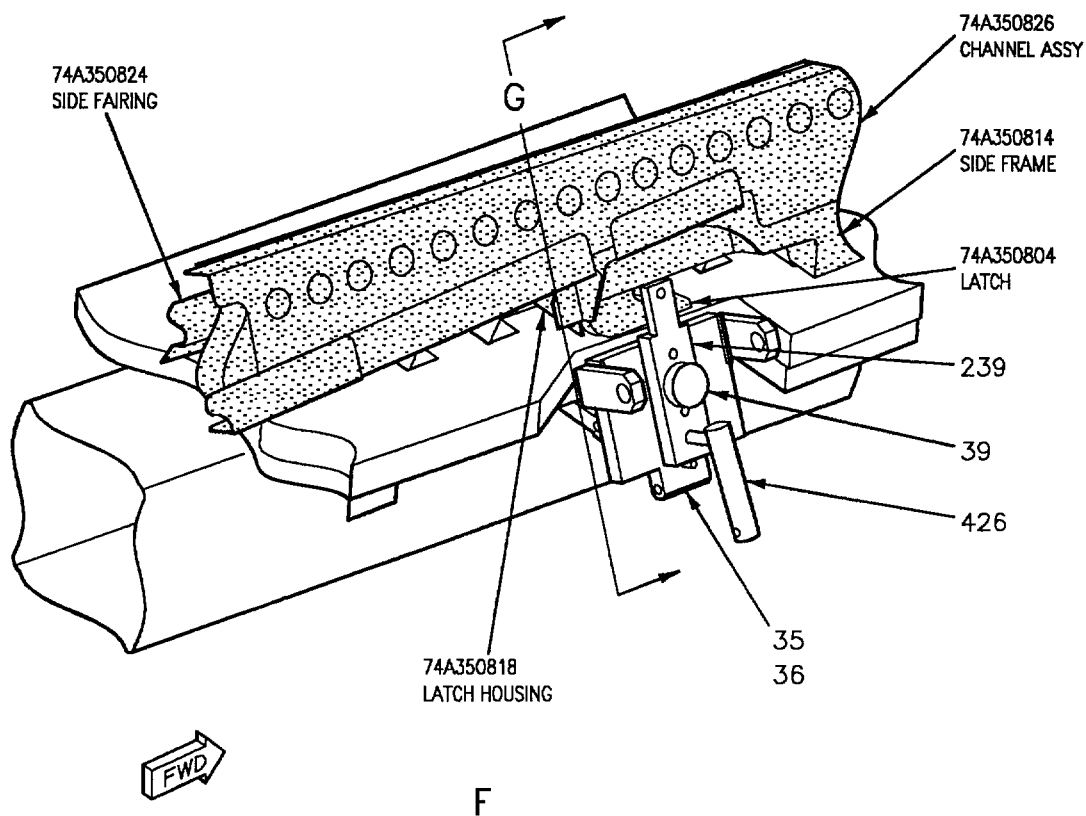


Figure 33. Replacement - Latch No. 2 (Sheet 4)

LATCH NO. 2	
AMBIENT TEMP. F°	CORRECTION DIMENSION
40°	0.081
45°	0.091
50°	0.103
55°	0.113
60°	0.125
65°	0.138
70°	0.150
75°	0.163
80°	0.176
85°	0.188
90°	0.201
95°	0.213
100°	0.226
105°	0.237
110°	0.248
115°	0.258
120°	0.268

467

H

Figure 33. Replacement - Latch No. 2 (Sheet 5)

DETAIL NO.	NAME	FUNCTION
B1	Traveler bushing	Guides 0.255 +0.007 -0.000 inch drill.
35, 36	Rigging pad	Rigging pad for latch no. 2 containing attach points for latch locator (detail 234, 239) and clamp half (detail 236).
39	Thumbscrew	Secures clamp half (detail 42, 236) and latch locator (detail 234, 239) to rigging pad (detail 35, 36).
40, 41	Drill blanket	Locates latch no. 2 attachment holes in 74A350814 side frame for drilling procedures.
42	Clamp half	Used with clamp half (detail 236) to locate drill blanket (detail 40, 41).
176	L-pin	Locates lower fairing support locators (detail 332, 334) in position.
207	L-pin	Secures seal locator pin (details 321, 408, and 465) in locating position.
234	Latch locator	Used to determine correct shim thickness for latch no. 2.
235	Locator dowel	Used as a rigging stop to set latch no. 2.
236	Clamp half	Used with clamp half (detail 42) to locate drill blanket (detail 40, 41).
239	Latch locator	Used to set latch no. 2 in correct Z plane location.
247	L-pin	Locates drill blanket (detail 40, 41) in correct X, Y, and Z plane location.
321	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location.
332, 334	Lower fairing support locators	Provides Z plane location at Y363.650.
408	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y283.488.
426	L-pin	Locates latch locator (detail 239) when ambient temperature is 70° F.
465	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y266.565, Y287.073, Y295.840, Y303.326, Y308.073, Y315.586, Y323.585, Y331.084, Y341.328, Y342.076, and Y350.452.
467	Ambient temperature chart	Used to determine correction dimension for various temperatures when setting latch no. 2.

Figure 33. Replacement - Latch No. 2 (Sheet 6)

DETAIL NO.	NAME	FUNCTION
469	Locator pin	Used as a reference point in measuring rigging dimension on latch no. 2.
519	Drill bushing	Guides traveler bushing (detail B1).
521	Roll pin	Used as a directional indicator to determine position of locator pin (details 321, 408, and 465)

Figure 33. Replacement - Latch No. 2 (Sheet 7)

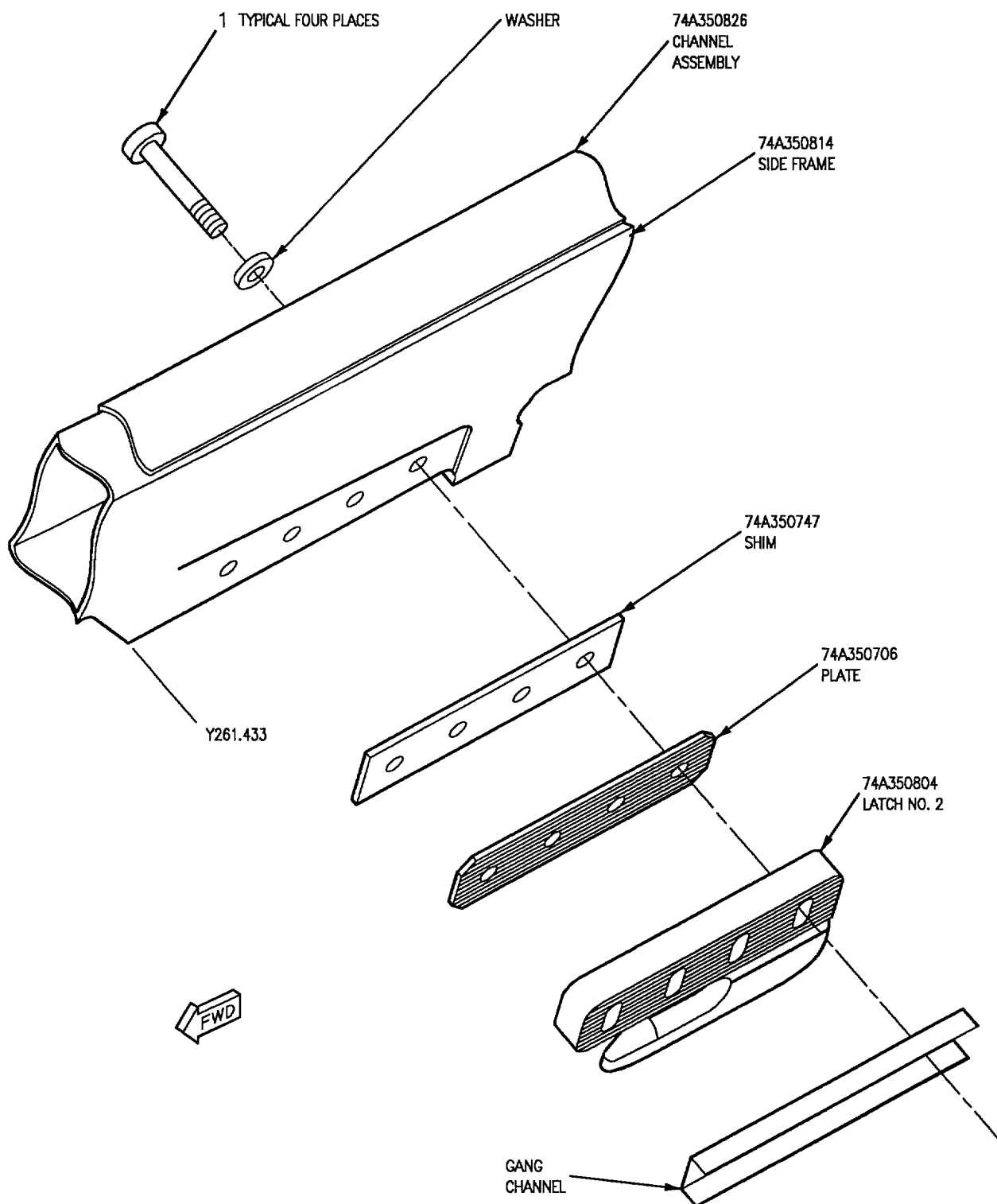


Figure 34. Latch No. 2, 74A350804, Fastener Index (Sheet 1)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 2	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1	753 THRU 760	4	0.255 +0.007 -0.000	T.F.I.M.25.0204158 0.2570 DRILL	ST3M747-4-16 3	AN960C416L		3M464N8A4-2
<p style="text-align: center;">LEGEND</p> <p>1 For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07).</p> <p>2 Part of RE274350006-1 canopy repair kit.</p> <p>3 Torque fastener to 50 - 70 inch pounds.</p>								

Figure 34. Latch No. 2, 74A350804, Fastener Index (Sheet 2)

36. **LATCH NO. 3 AND NO. 4, 74A350805, REPLACEMENT.** See figure 35.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, F/A-18B Canopy	RE174350006-1
Repair Kit, Canopy	RE274350006-1
Torque Wrench 5 to 150 Inch Pounds	-

Materials Required

Nomenclature	Specification or Part Number
Barrier Material	MIL-B-131, Class 1
Cheesecloth	CCC-C-440, Type 1, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108
Isopropyl Alcohol	TT-I-735
Sealing Compound	MIL-S-22473, Grade AA
Shim, Peel	74A350747-2001 5052-H39 Alum Lam 0.094x1.10x4.10



To prevent damage to transparency, be sure barrier material is installed between transparency and ethyl foam. See canopy preparation (WP006 01).

NOTE

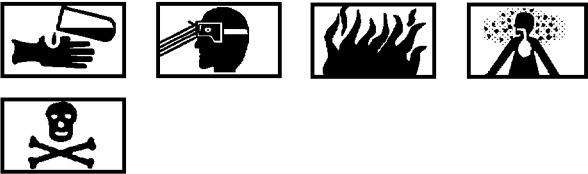
The 74A350805 latch, 74A350706 plate, and 74A350747 shims are used at no. 3 and no. 4 latch locations. Procedures are applicable to both locations, except where noted.

37. **REMOVAL.**

- a. Load canopy into fixture (WP006 01).

b. Remove four bolts attaching 74A350805 latch to 74A350814 side frame. See figure 36 for fastener and part location.

c. Remove 74A350805 latch, 74A350706 plate, and 74A350747 shims from 74A350814 side frame.



Isopropyl Alcohol 2

d. Clean area where latch was removed using clean cheesecloth moistened with isopropyl alcohol.

38. **INSTALLATION.**

a. Raise lower fairing support locator (detail 332, 334) to locating position and install L-pin (detail 176). See detail A.

b. Raise seal locator pin (details 321, 408, and 465) inside seal retainers and rotate until roll pin (detail 621) points forward or aft. See detail B.

c. Secure seal locator pin (details 321, 408, and 465) by inserting L-pin (detail 207). See detail B.

NOTE

If drilling latch attach holes in new 74A350814 side frame, do steps d or e. If installing new latch to existing 74A350814 side frame, go to step h.

d. Locate and drill latch attach holes in new 74A350814 side frame at latch no. 3 location per steps below:

(1) Install clamp half (detail 249) onto rigging pad (detail 43, 44) and secure with thumbscrew (detail 39). See detail C.

(2) Install clamp half (detail 42) over flange of 74A350814 side frame and secure to clamp half (detail 249) using thumbscrew (detail 39). See detail C.

(3) Rotate drill blanket (detail 45, 46) in position and secure by installing L-pin (detail 247). See detail C.

(4) At hole location 761 thru 764, left side, or 765 thru 768, right side:

(a) Install traveler bushing (detail B1) in drill bushing (detail 519). See detail C.



Do not drill into 74A350817 seal retainer.

(b) Drill 0.255 +0.007 -0.000 inch diameter hole in 74A350814 side frame. See figure 36 for drilling information.

e. Locate and drill latch attach holes in new 74A350814 side frame at latch no. 4 location per steps below:

(1) Install clamp half (detail 249) onto rigging pad (detail 57, 58) and secure with thumbscrew (detail 39). See detail C.

(2) Install clamp half (detail 42) over flange of 74A350814 side frame and secure to clamp half (detail 249) using thumbscrew (detail 39). See detail C.

(3) Rotate drill blanket (detail 53, 54) in position and secure by installing L-pin (detail 247). See detail C.

(4) At hole location 769 thru 772, left side, and 773 thru 776, right side:

(a) Install traveler bushing (detail B1) in drill bushing (detail 519). See detail C.



Do not drill into 74A350817 seal retainer.

(b) Drill 0.255 +0.007 -0.000 inch diameter hole in 74A350814 side frame. See figure 36 for drilling information.

f. Remove L-pin (detail 247) and retract drill blanket (detail 45, 46 or 53, 54). See detail C.

g. Loosen thumbscrew (detail 39) and remove clamp half (details 42 and 249) from rigging pad (details 43, 44 or 57, 58). See detail C.

h. Apply finish system to new 74A350805 latch, 74A350706 plates, and any other area requiring finish system touchup (A1-F18AC-SRM-500, WP021 00).

i. Install new 74A350805 latch per steps below:

NOTE

Do substep (1) for latch no. 3, or do substep (2) for latch no. 4.

(1) Position latch locator (detail 248) onto rigging pad (detail 43, 44) and secure with thumbscrew (detail 39). See detail D.

(2) Position latch locator (detail 248) onto rigging pad (detail 57, 58) and secure with thumbscrew (detail 39). See detail D.

NOTE

Use of 74A350747 peel shims is optional; these are installed only when needed to get correct fit of mating parts.

(3) Insert feeler gage between latch locator (detail 248) and outboard surface of 74A350814 side frame to determine thickness of 74A350747 peel shim. See detail E.

NOTE

Nominal gap is 0.094 inch.

(4) Peel 74A350747 shim to fit gap.

(5) Remove latch locator (detail 248).

(6) Position 74A350747 peel shims, 74A350706 plate, and 74A350805 latch inline with holes in 74A350814 side frame. Install bolt and washer into gang channel. See figure 36 for fastener information.

NOTE

Do substep (7) for latch no. 3, or do substep (8) for latch no. 4.

(7) Position latch locator (detail 242) onto rigging pad (detail 43, 44) by inserting L-pin (detail 426). See detail F.

(8) Position latch locator (detail 242) onto rigging pad (detail 57, 58) by inserting L-pin (detail 426). See detail F.

NOTE

With L-pin (detail 426) installed, latch locator (detail 242) is located at 0.150 inch nominal dimension at 70° F. For temperatures above or below 70° F, remove L-pin (detail 426) and adjust latch locator (detail 242) to correspond with correction dimension on chart (detail 467). See details G and H.

(9) Determine ambient temperature and select corresponding correction dimension from chart (detail 467). Adjust latch locator (detail 242) using feeler gage and secure with thumbscrew (detail 39). See detail F.

NOTE

Ambient temperature measurement is taken from the lower surface of latch locator (detail 242) and upper surface of locator pin (detail 469). See detail G.

(10) Adjust 74A350805 latch in 74A350706 serrated plate until latch contacts locating roller (detail 246). See detail G.

NOTE

Latch serrations are 0.031 inch between centers. Serrations in latch and plate must engage each other.

(11) Latch locator (detail 242) may be adjusted up or down maximum of 0.016 inch from initial setting to engage latch and plate serrations.

(12) Check for 0.100 inch nominal gap between inboard surface of 74A350805 latch and outboard surface of latch locator (detail 242). Add 74A350747 peel shims as required to maintain 0.100 inch nominal gap. See detail G.



Sealing Compound

24

(13) Apply sealing compound to fastener threads and torque to 50-70 inch pounds (QA). See figure 36 for fastener information.

j. Apply finish system, as required, to repair area (A1-F18AC-SRM-500, WP021 00).

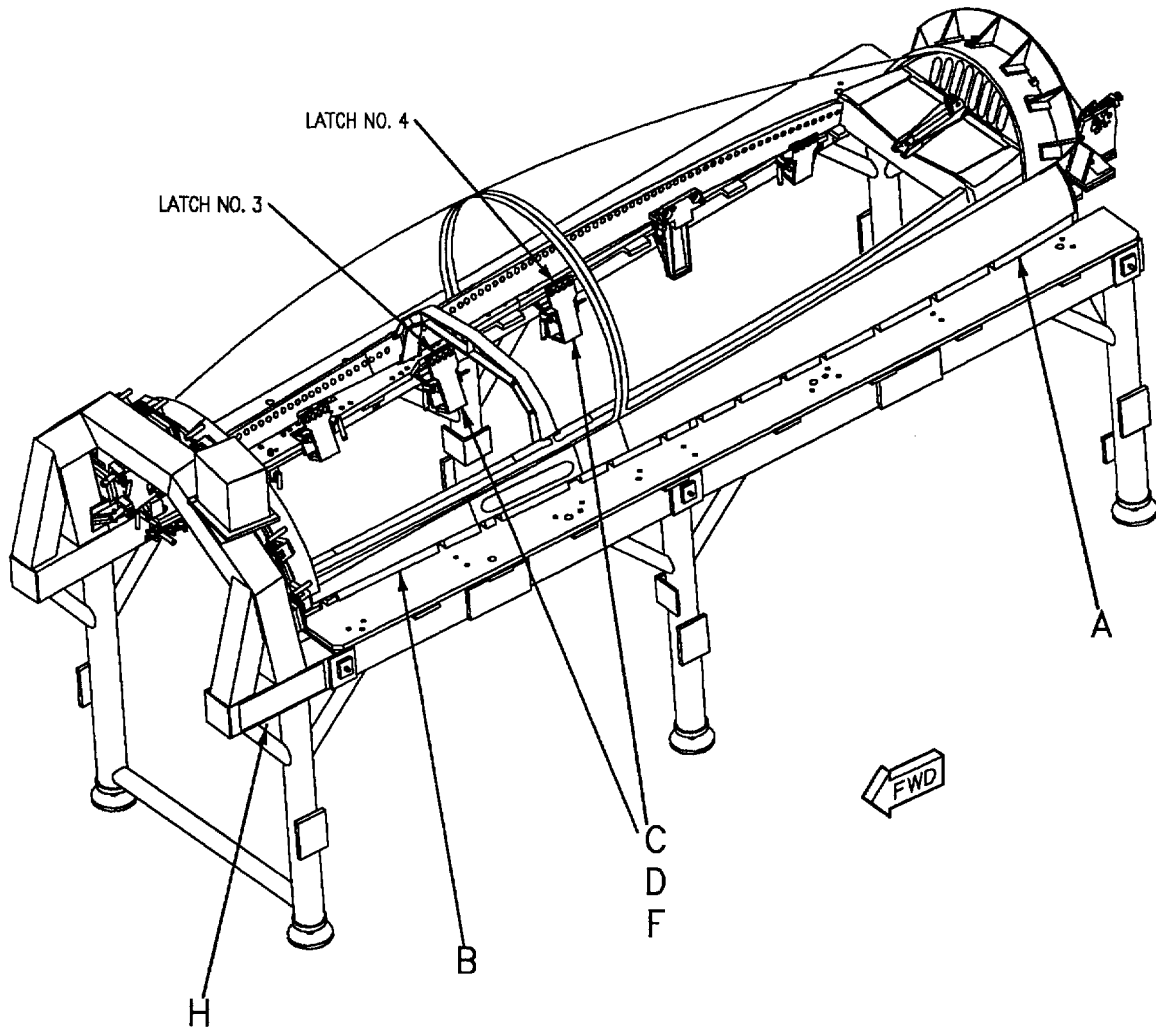


Figure 35. Replacement - Latch No. 3 and No. 4 (Sheet 1)

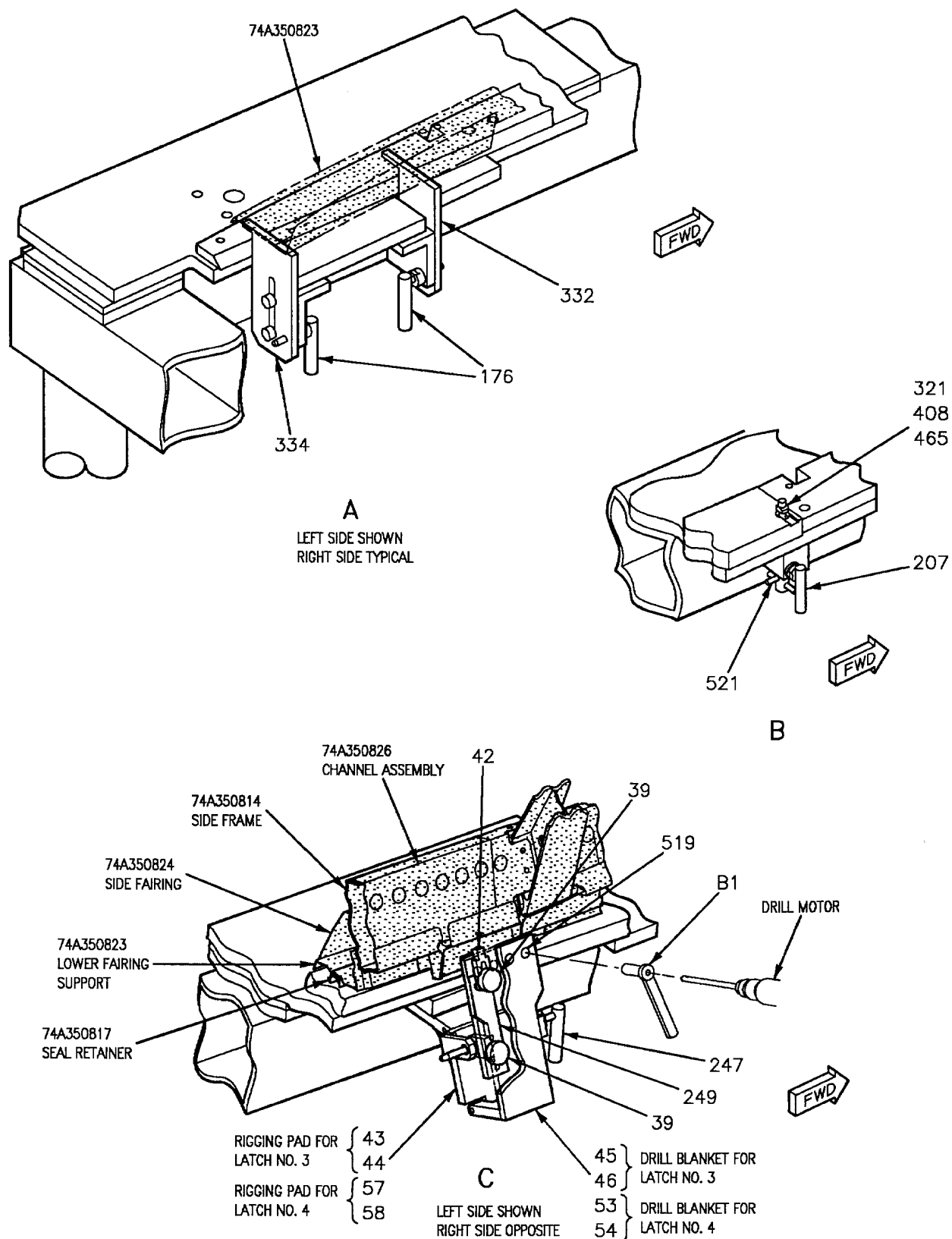


Figure 35. Replacement - Latch No. 3 and No. 4 (Sheet 2)

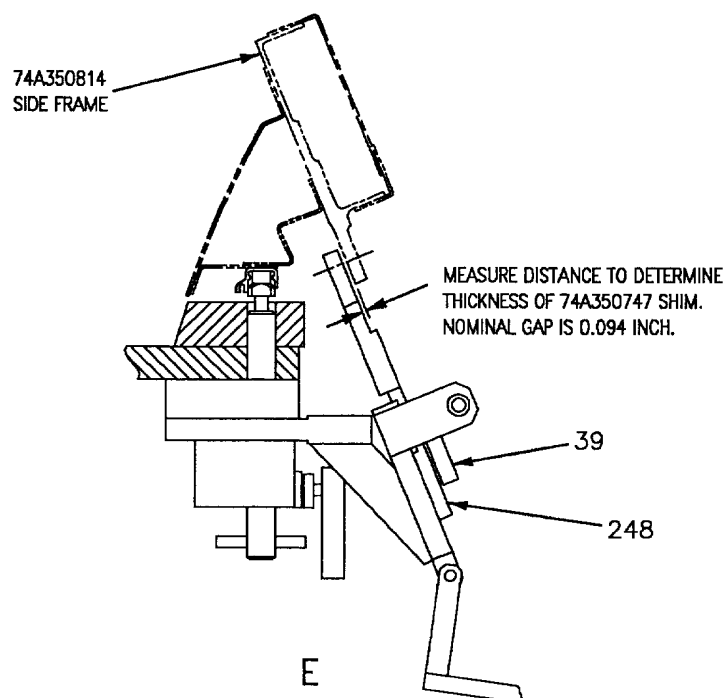
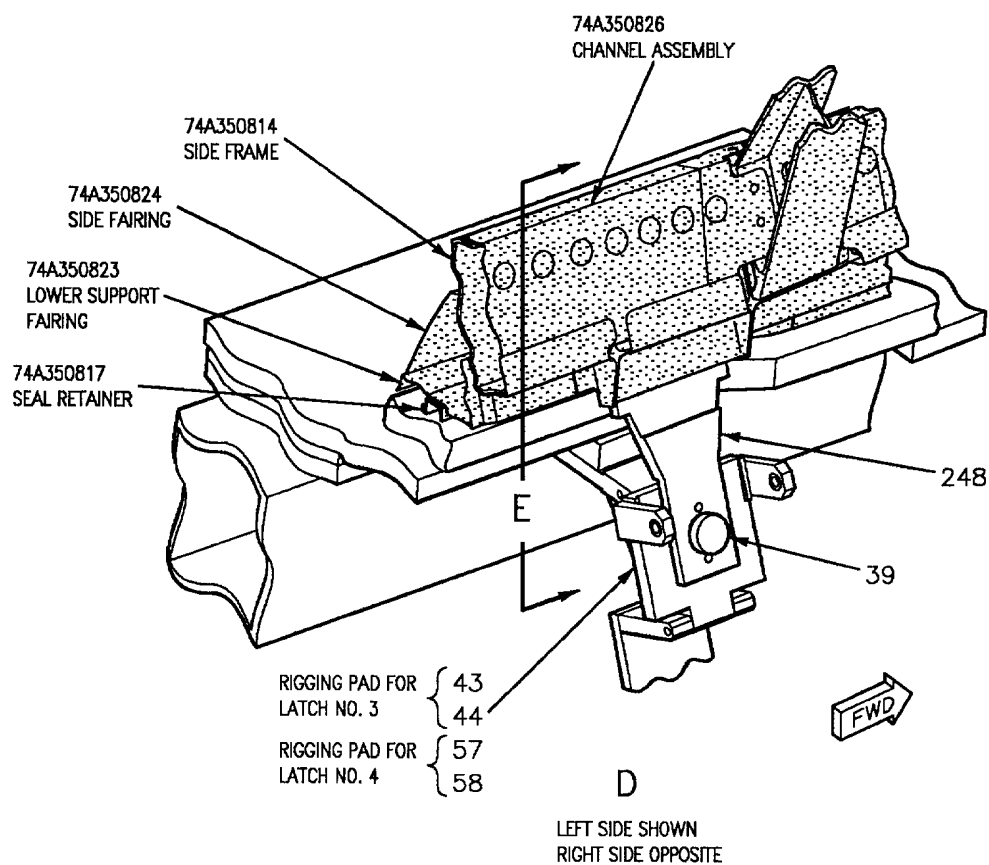


Figure 35. Replacement - Latch No. 3 and No. 4 (Sheet 3)

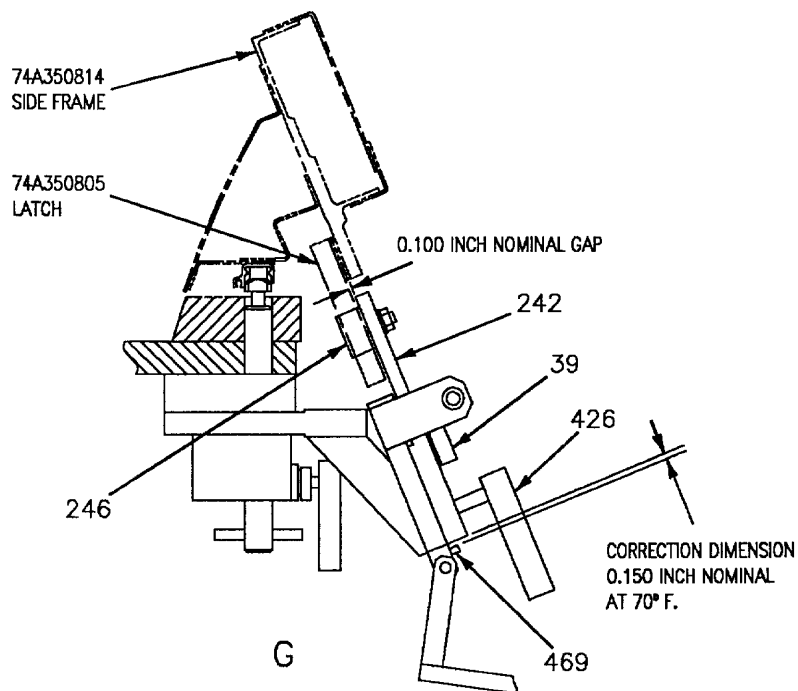
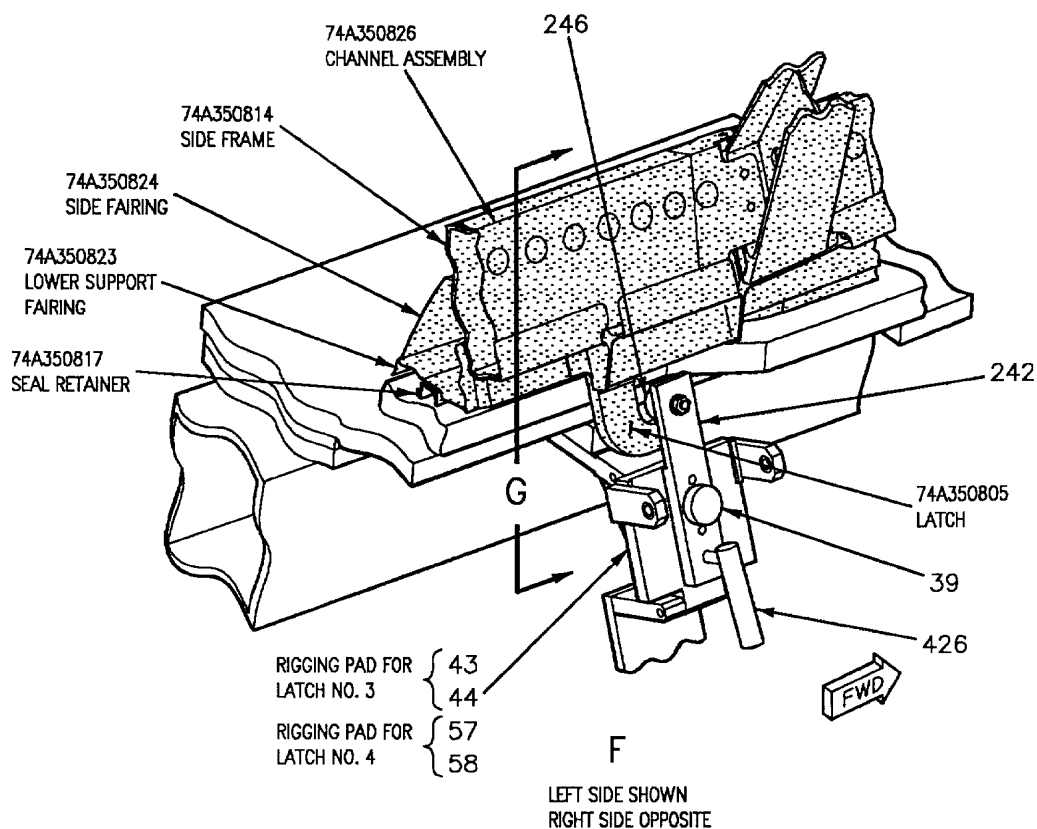


Figure 35. Replacement - Latch No. 3 and No. 4 (Sheet 4)

LATCH NO. 3		LATCH NO. 4	
AMBIENT TEMP. F°	CORRECTION DIMENSION	AMBIENT TEMP. F°	CORRECTION DIMENSION
40°	0.072	40°	0.072
45°	0.082	45°	0.082
50°	0.096	50°	0.096
55°	0.108	55°	0.108
60°	0.122	60°	0.122
65°	0.136	65°	0.136
70°	0.150	70°	0.150
75°	0.165	75°	0.165
80°	0.179	80°	0.179
85°	0.195	85°	0.195
90°	0.209	90°	0.209
95°	0.225	95°	0.223
100°	0.240	100°	0.239
105°	0.255	105°	0.253
110°	0.270	110°	0.268
115°	0.285	115°	0.282
120°	0.299	120°	0.296

467

H

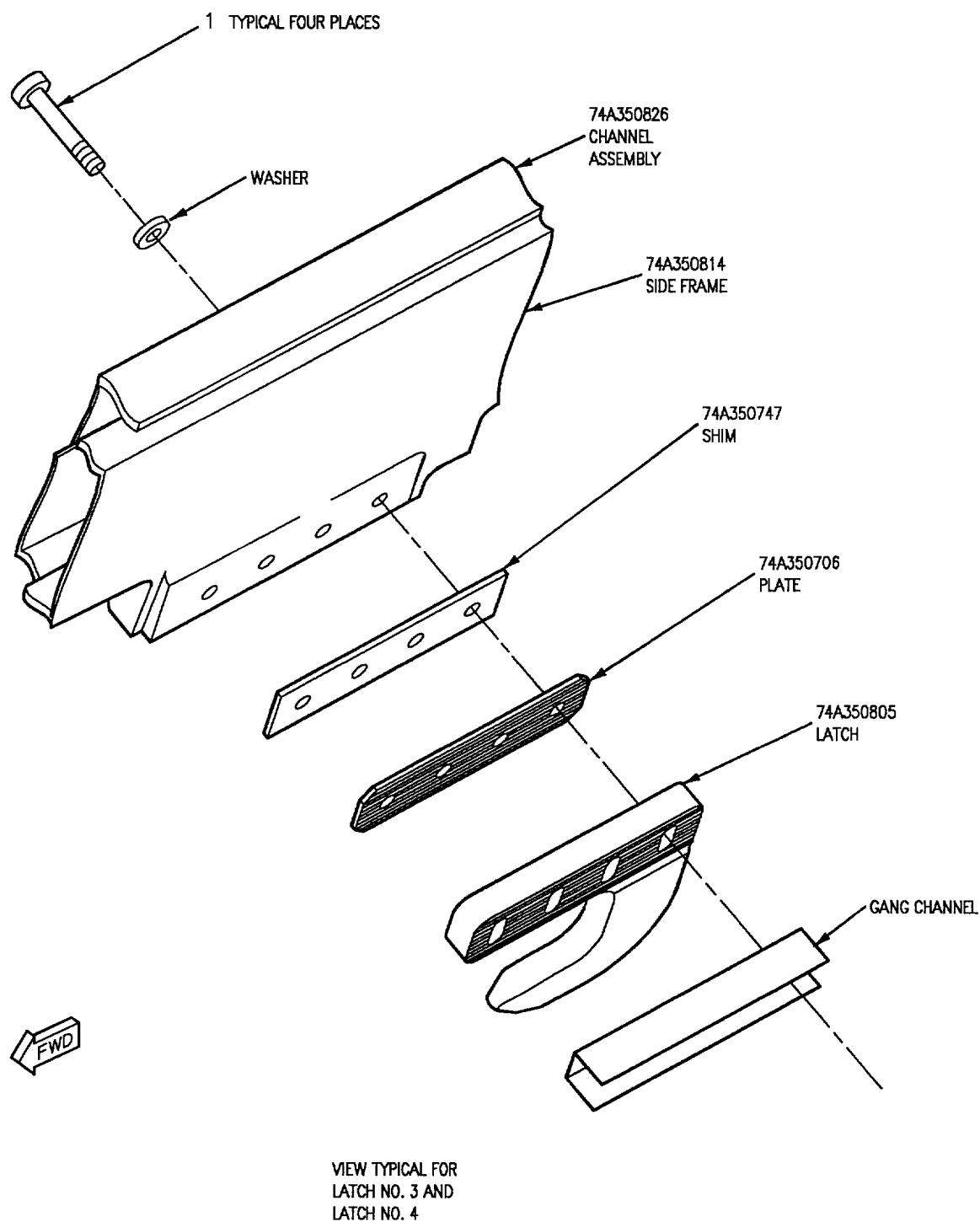
Figure 35. Replacement - Latch No. 3 and No. 4 (Sheet 5)

DETAIL NO.	NAME	FUNCTION
B1	Traveler bushing	Guides 0.255 +0.007 -0.000 inch drill.
39	Thumbscrew	Secures clamp half (detail 42, 249) and latch locator (detail 242, 248) to rigging pad (detail 43, 44).
42	Clamp half	Used with clamp half (detail 249) to locate drill blanket (detail 45, 46) or (detail 53, 54).
43, 44	Rigging pad	Rigging pad for latch no. 3 containing attach points for latch locator (detail 242, 248) and clamp half (detail 42, 249).
45, 46	Drill blanket	Locates latch no. 3 attachment holes in 74A350814 side frame for drilling procedures.
53, 54	Drill blanket	Locates latch no. 4 attachment holes in 74A350814 side frame for drilling procedures.
57, 58	Rigging pad	Rigging pad for latch no. 4 containing attach points for latch locator (detail 242, 248) and clamp half (detail 42, 249).
176	L-pin	Locates lower fairing support locators (detail 332, 334) in position.
207	L-pin	Secures seal locator pin (details 321, 408, and 465) in locating position.
242	Latch locator	Use to set latch no. 3 and 4 in correct Z plane location.
246	Locating roller	Used as a rigging stop to set latch no. 3 and 4 in correct Z plane location.
247	L-pin	Locates drill blanket (detail 45, 46) or (detail 53, 54) in correct X, Y, and Z plane location.
248	Latch locator	Used to determine correct shim thickness for latch no. 3 and 4.
249	Clamp half	Used with clamp half (detail 42) to locate drill blanket (detail 45, 46) or (detail 53, 54).
321	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location.
332, 334	Lower fairing support locators	Provides Z plane location at Y363.650.
408	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y283.488.
426	L-pin	Locates latch locator (detail 242) when ambient temperature is 70° F.

Figure 35. Replacement - Latch No. 3 and No. 4 (Sheet 6)

DETAIL NO.	NAME	FUNCTION
465	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y266.565, Y287.073, Y295.840, Y303.326, Y308.073, Y315.586, Y323.585, Y331.084, Y341.328, Y342.076, and Y350.452.
467	Ambient temperature chart	Used to determine correction dimension for various temperatures when setting latch no. 3 and 4.
469	Locator pin	Used as a reference point in measuring rigging dimension on latch no. 3 and 4.
519	Drill bushing	Guides traveler bushing (detail B1).
521	Roll pin	Used as a directional indicator to determine position of locator pin (details 321, 408, and 465)

Figure 35. Replacement - Latch No. 3 and No. 4 (Sheet 7)



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Figure 36. Latch No. 3 and No. 4, 74A350805, Fastener Index (Sheet 1)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 2	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1	4	4	0.255 +0.007 -0.000	T.F.I.M.25.0204158 0.2570 DRILL	ST3M747-4-16 3	AN960C416L		3M464N8A4-2
<p style="text-align: center;">LEGEND</p> <p>1 For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07).</p> <p>2 Part of RE274350006-1 canopy repair kit.</p> <p>3 Torque fastener to 50 - 70 inch pounds.</p> <p>4 Hole numbers for latch no. 3 are 761 thru 768. Hole numbers for latch no. 4 are 769 thru 776.</p>								

Figure 36. Latch No. 3 and No. 4, 74A350805, Fastener Index (Sheet 2)

39. **CONTROL CAM, LATCH NO. 5, 74A350842, REPLACEMENT.** See figure 37.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, F/A-18B Canopy	RE174350006-1
Repair Kit, Canopy	RE274350006-1
Drilling Machine Accessory Kit	RE574000002-1
Rack Feed Drilling Machine, 180 RPM	74D110312-1003
Drill Motor, 90° Angle	-
Torque Wrench, 0 to 300 Inch Pounds	-

Materials Required

Nomenclature	Specification or Part Number
Barrier Material	MIL-B-131, Class 1
Cheesecloth	CCC-C-440, Type 1, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108
Isopropyl Alcohol	TT-I-735
Shim	74A350847-2023 6061-T6 Alclad 0.063 x 1.34 x 6.16
Shim, Peel	74A350847-2021 5052-H39 Alum Lam 0.048 x 1.34 x 6.16



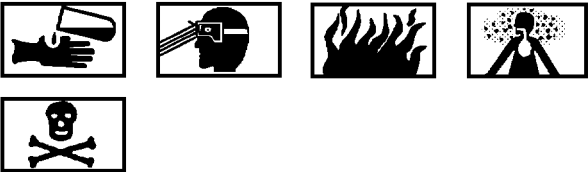
To prevent damage to transparency, be sure barrier material is installed between transparency and ethyl foam. See canopy preparation (WP006 01).

40. REMOVAL.

a. Load canopy into fixture (WP006 01).

b. Remove two bolts attaching 74A350842 control cam to 74A350814 side frame. See figure 38 for fastener and part location.

c. Remove 74A350842 control cam, 74A350807 plate, and 74A350847 shims from 74A350814 side frame.



Isopropyl Alcohol 2

d. Clean area where control cam was removed using clean cheesecloth moistened with isopropyl alcohol.

41. INSTALLATION.

a. Raise lower fairing support locator (detail 332, 334) to locating position and install L-pin (detail 176). See detail A.

b. Raise seal locator pin (details 321, 408, and 465) inside seal retainers and rotate until roll pin (detail 521) points forward or aft. See detail B.

c. Secure seal locator pin (details 321, 408, and 465) by inserting L-pin (detail 207). See detail B.

NOTE

If drilling control cam attach holes in new 74A350814 side frame, do steps below. If installing new control cam to existing 74A350814 side frame, go to step f.

d. Locate and drill control cam attach holes in new 74A350814 side frame per steps below:

(1) Rotate drill blanket (detail 32, 33) in position and secure by installing L-pin (detail 34). See detail C.

(2) At hole location 777 and 778, left side, or 781 and 782, right side:

NOTE

Nosepiece (detail 545) and lock bushing (details GM, GN, or GP) are part of RE574000002-1 drilling machine accessory kit. SPT-74A350006-5001TD (0.3750), SPT2-74A350006-5001TD (0.7031), and SPT3-74A350006-5001TD (0.7190) are part of RE274350006-1 canopy tool kit.

(a) Install nosepiece (detail 545), lock bushing (detail GM), and SPT-74A350006-5001TD drill on 74D110312-1003 rack feed drilling machine. Do drilling machine accessory kit equipment setup procedures (A1-F18AC-SRM-200, WP004 16). See detail C.

(b) Install drilling machine lock bushing (detail GM) in drill blanket lock bushing (detail 224) and drill 0.3750 inch diameter hole in 74A350814 side frame. Do rack feed drilling machine, 180 RPM equipment setup and operation procedures (A1-F18AC-SRM-200, WP004 17). See figure 38 for additional drilling information. See detail C.

(c) Install nosepiece (detail 545), lock bushing (detail GN), and SPT2-74A350006-5001TD drill on 74D110312-1003 rack feed drill motor. Do drilling machine accessory kit equipment setup procedures (A1-F18AC-SRM-200, WP004 16). See detail C.

(d) Install drilling machine lock bushing (detail GN) in drill blanket lock bushing (detail 224) and drill 0.7031 inch diameter hole in 74A350814 side frame. Do rack feed drilling machine, 180 RPM equipment setup and operation procedures (A1-F18AC-SRM-200, WP004 17). See figure 38 for additional drilling information. See detail C.

(e) Install nosepiece (detail 545), lock bushing (detail GP), and SPT3-74A350006-5001TD reamer on 74D110312-1003 rack feed drilling machine. Do drilling machine accessory kit equipment setup procedures (A1-F18AC-SRM-200, WP004 16). See detail C.

(f) Install drilling machine lock bushing (detail GP) in drill blanket lock bushing (detail 224) and ream 0.7190 inch diameter hole in 74A350814 side frame. Do rack feed drilling machine, 180 RPM equipment setup and operation procedures (A1-F18AC-SRM-200, WP004 17). See figure 38 for additional drilling information. See detail C.

(3) At hole location 779 and 780, left side, or 783 and 784, right side:

NOTE

T.F.I.M.25.0202-160 and T.F.I.M.25.0202-248 are part of RE274350006-1 canopy repair kit.

(a) Install drill bushing (detail 264) into drill blanket (detail 32, 33). See detail D.

(b) Install T.F.I.M.25.0202-160 drill on right angle drill motor and drill 0.1875 inch diameter hole in 74A350814 side frame. See figure 38 for drilling information.

(c) Install drill bushing (detail 265) into drill blanket (detail 32, 33). See detail D.

(d) Install T.F.I.M.25.0202-248 drill on right angle drill motor and drill 0.3750 inch diameter hole in 74A350814 side frame. See figure 38 for drilling information.

e. Remove L-pin (detail 34) and rotate drill blanket (detail 32, 33) in stowed position. See detail C or D.

f. Apply finish system to new 74A350842 control cam, 74A350807 plate, and any other area requiring finish system touchup (A1-F18AC-SRM-500, WP021 00).

g. Install new 74A350842 control cam per steps below:

(1) Remove L-pin (detail 207) and lower seal locator pin (details 321, 408, and 465). See detail B.

(2) Remove L-pin (detail 176) and slide down lower fairing support locator (detail 332, 334). See detail A.

(3) Install latch locator (detail 239) at latch locations 2 and 6. See figures 33 and 39, this WP.

(4) Install latch locator (detail 242) at latch locations 3 and 4. See figure 35, this WP.

(5) Install locator pin (detail 355) at latch location 1. See detail E.

(6) Install roller pin (detail 356) into locator bushing (detail 231) located in rigging pad (detail 30, 31). See detail F.

NOTE

74A350847 shims are optional and are installed only when needed to get correct fit of mating parts.

(7) Determine ambient temperature and select corresponding correction dimension from chart (detail 467). See detail H.

(8) Insert feeler gage between lower surface of roll pin (detail 356) and upper surface of control cam lobe to determine thickness of 74A350847 shims. See detail G.

NOTE

Nominal gap is 0.150 inch at 70° F.

(9) Peel 74A350847 shim to fit gap.

(10) Position 74A350847 shims, 74A350807 plate, and 74A350842 control cam inline with holes in 74A350814 side frame. Install bolt and washer into nut and retainer. See figure 38 for fastener information.

NOTE

Control cam serrations are 0.031 inch between centers. Serrations in control cam and plate must engage each other.

(11) Adjust 74A350842 control cam in 74A350807 serrated plate until 0.459 ± 0.016 inch gap can be maintained between roll pin (detail 356) and forward surface of control cam lobe. See detail G.

(12) Torque fasteners to 160 - 190 inch pounds (QA). See figure 38 for fastener information.

h. Apply finish system, as required, to repair area (A1-F18AC-SRM-500, WP021 00).

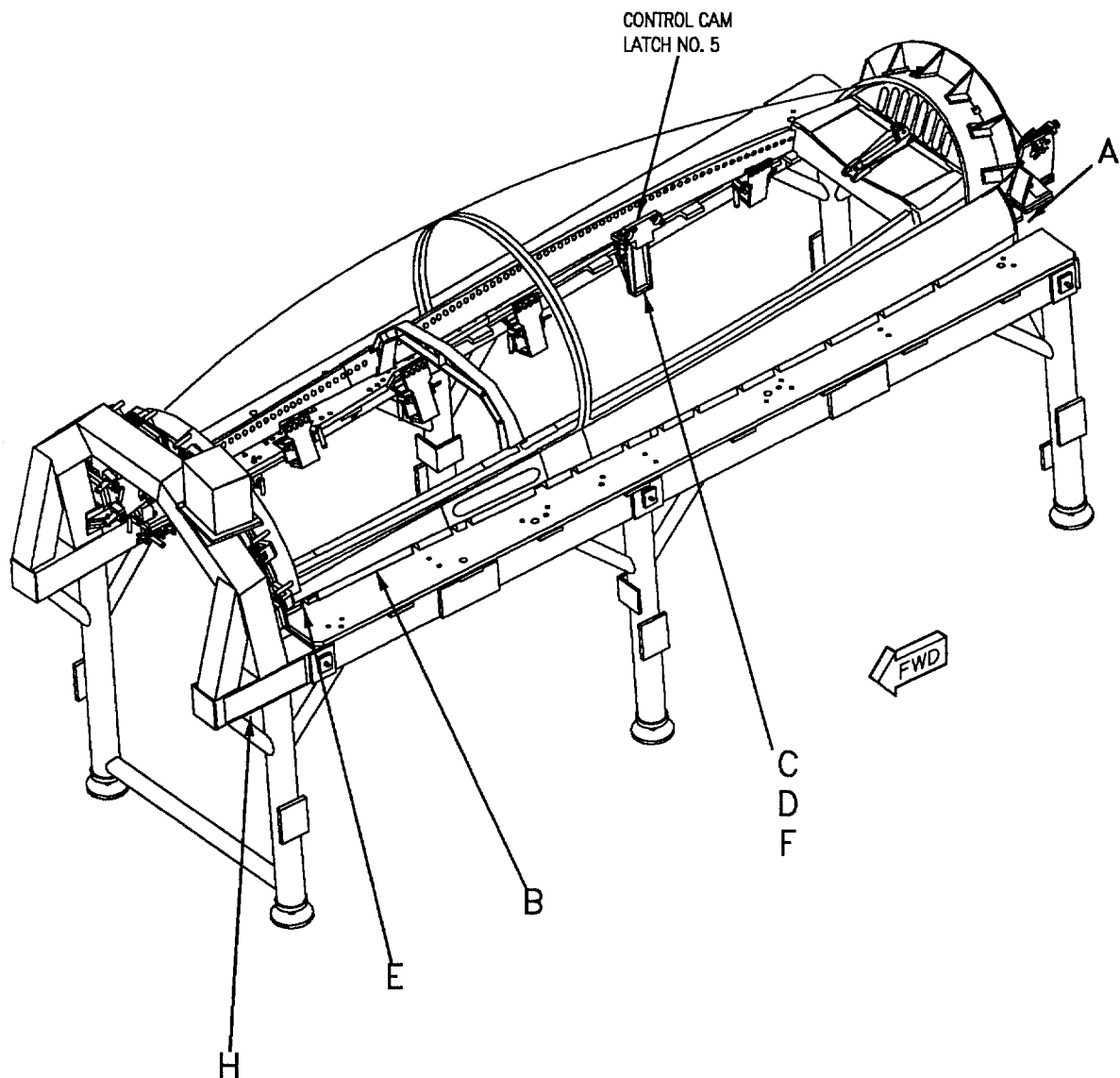


Figure 37. Replacement - Control Cam, Latch No. 5 (Sheet 1)

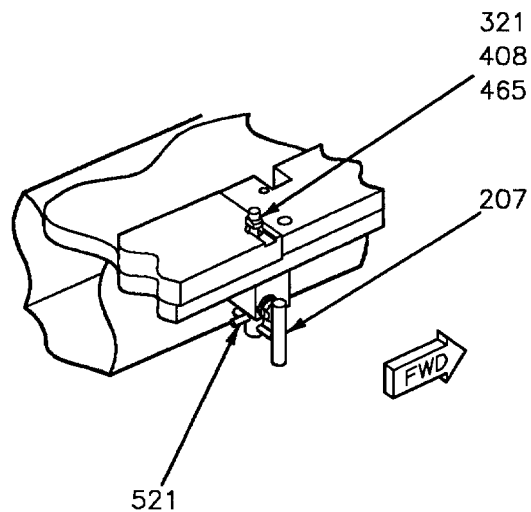
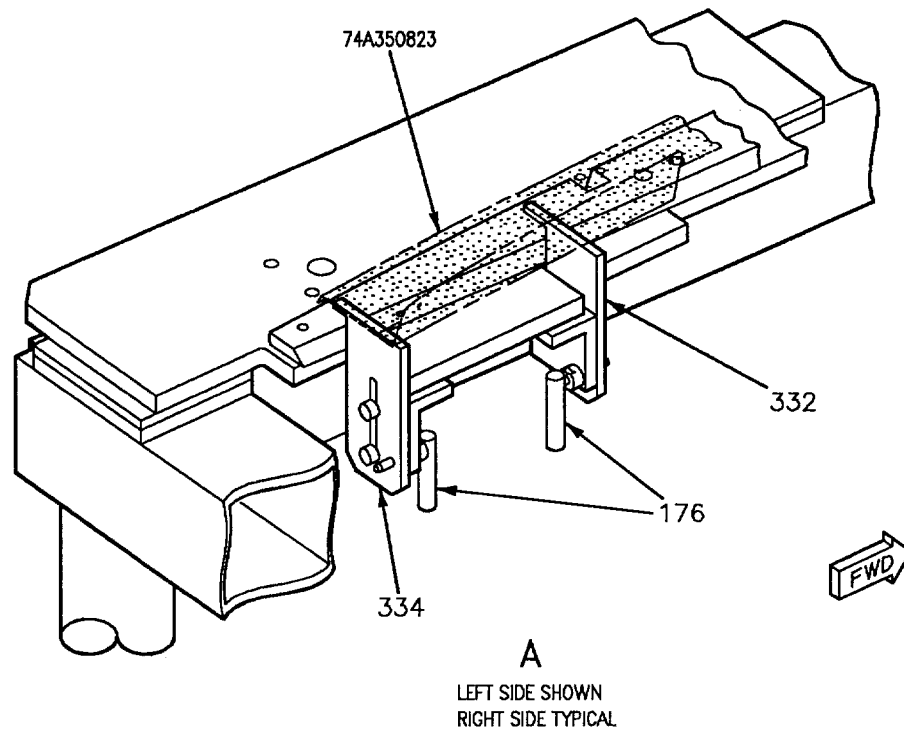
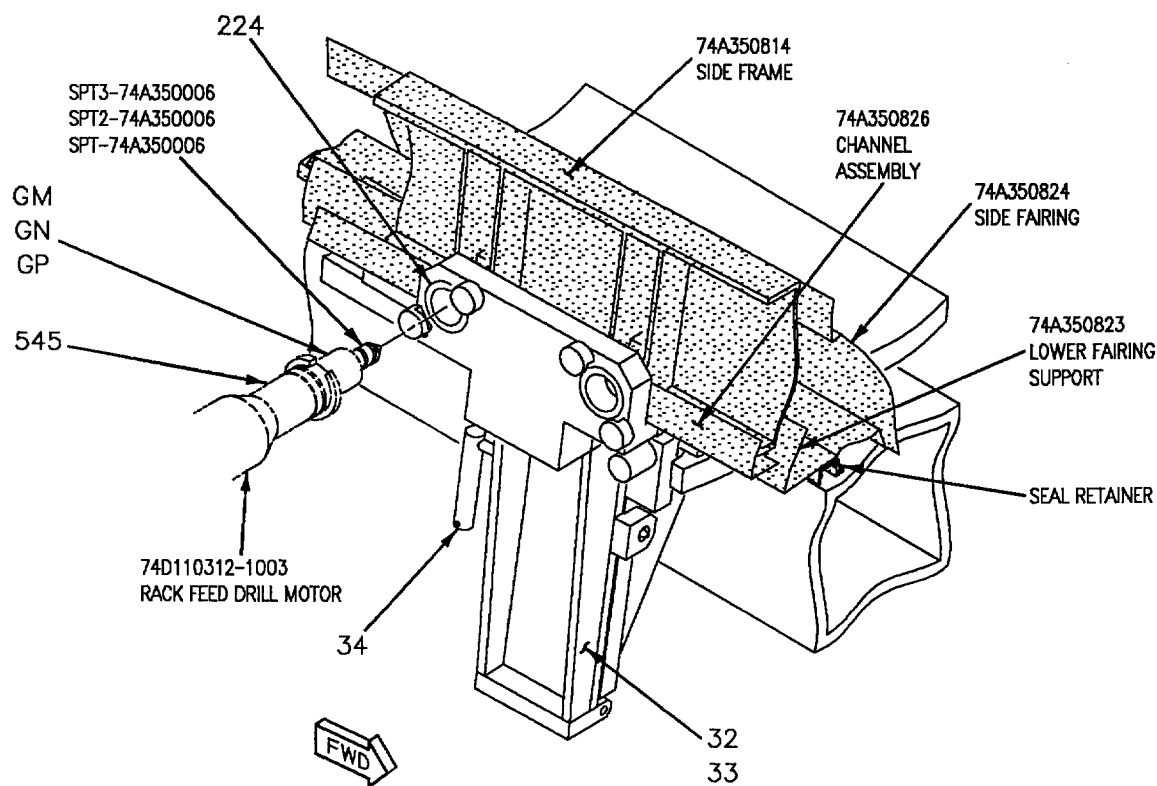
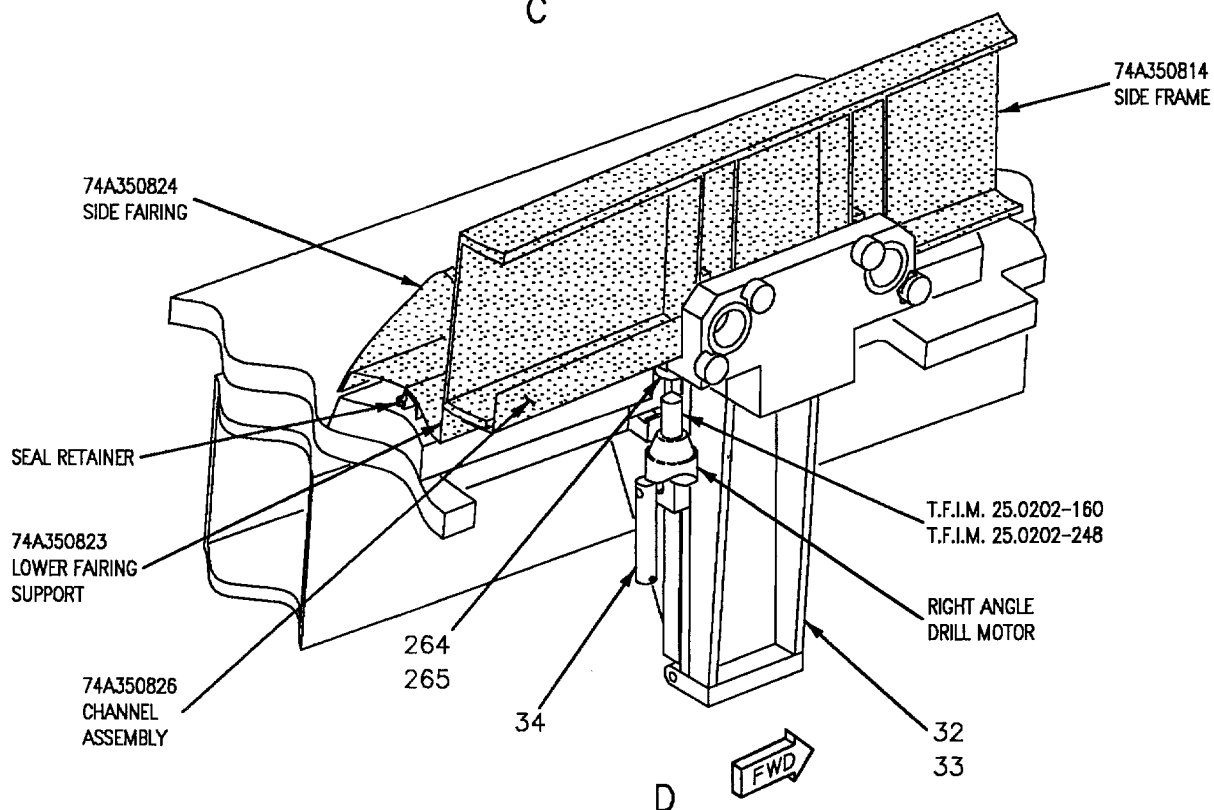


Figure 37. Replacement - Control Cam, Latch No. 5 (Sheet 2)



C



D

Figure 37. Replacement - Control Cam, Latch No. 5 (Sheet 3)

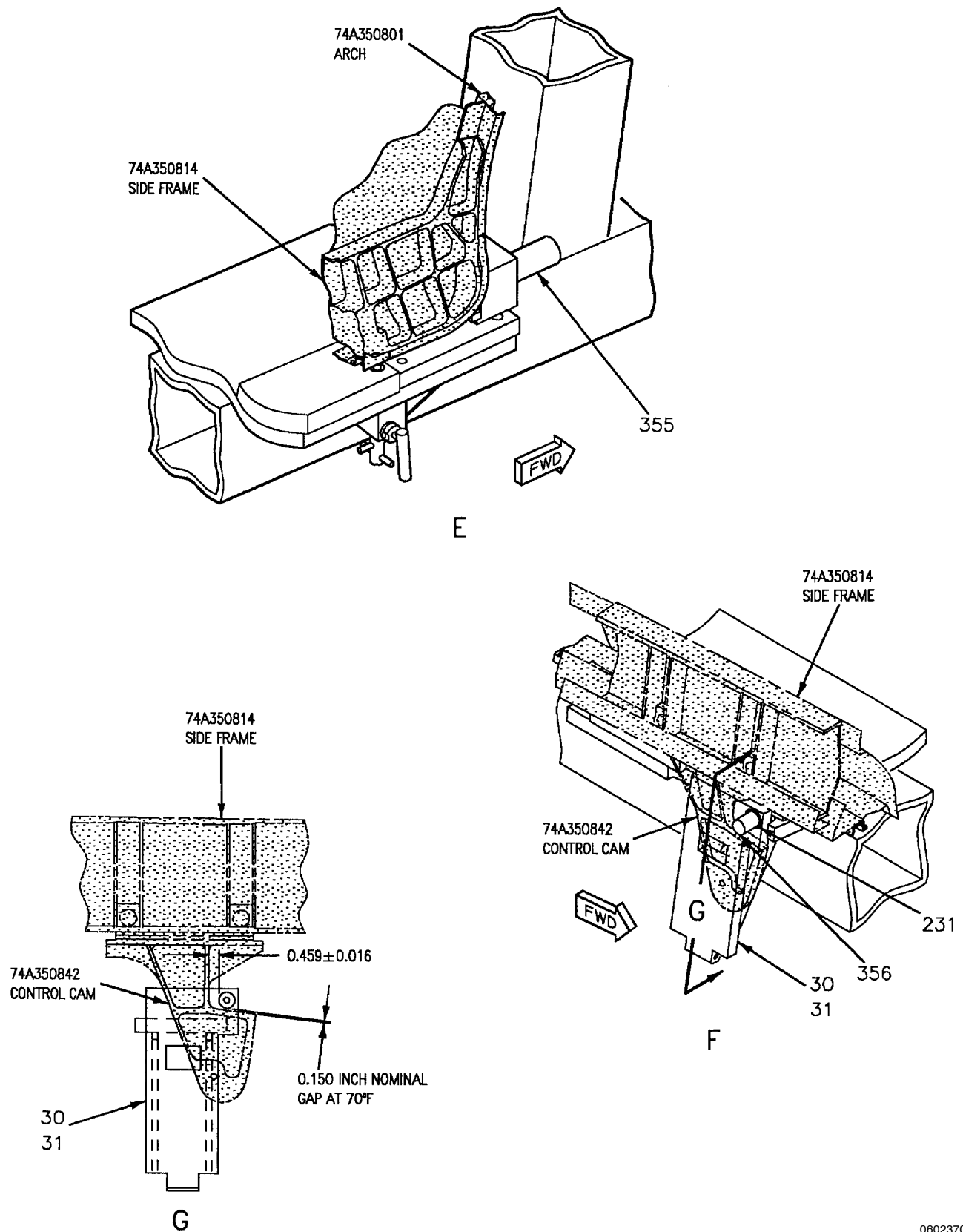


Figure 37. Replacement - Control Cam, Latch No. 5 (Sheet 4)

LATCH NO. 5	
AMBIENT TEMP. °F	CORRECTION DIMENSION
40°	0.213
45°	0.203
50°	0.193
55°	0.183
60°	0.172
65°	0.161
70°	0.150
75°	0.138
80°	0.126
85°	0.115
90°	0.102
95°	0.090
100°	0.078
105°	0.066
110°	0.054
115°	0.043
120°	0.030

467

H

Figure 37. Replacement - Control Cam, Latch No. 5 (Sheet 5)

DETAIL NO.	NAME	FUNCTION
GM	Lock bushing	Guides 0.3750 inch diameter drill.
GN	Lock bushing	Guides 0.7031 inch diameter drill.
GP	Lock bushing	Guides 0.7190 inch diameter reamer.
30, 31	Rigging pad	Locating pad for latch no. 5 containing attach points for drill blanket (detail 32, 33) and roller pin (detail 356).
32, 33	Drill blanket	Locates latch no. 5 attachment holes in 74A350814 side frame for drilling operations.
34	L-pin	Locates and secures drill blanket (detail 32, 33) to rigging pad (detail 30, 31).
176	L-pin	Secures lower fairing support locators (detail 332, 334) in locating position.
207	L-pin	Secures seal locator pin (details 321, 408, and 465) in locating position.
224	Lock bushing	Secures drilling machine lock bushing (detail GM, GN, or GP) to drill blanket (32, 33).
231	Locator bushing	Locates roller pin (detail 356) in rigging pad (detail 30, 31).
239	Latch locator	Used to set latch no. 2 and 6 in correct Z plane location.
242	Latch locator	Used to set latch no. 3 and 4 in correct Z plane location.
264	Drill bushing	Guides 0.1875 inch diameter drill.
265	Drill bushing	Guides 0.3750 inch diameter drill.
321	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location.
332, 334	Lower fairing support locator	Provides Z plane location at Y363.650.
355	Locator pin	Full size pin used in latch no. 1 when setting latch no. 5.
356	Roller pin	Used to set latch no. 5 in correct X,Y, and Z plane location.
408	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y283.488.
465	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y266.565, Y287.073, Y295.840, Y303.326, Y308.073, Y315.586, Y323.585, Y331.084, Y341.328, Y342.076, and Y350.452.

Figure 37. Replacement - Control Cam, Latch No. 5 (Sheet 6)

DETAIL NO.	NAME	FUNCTION
467	Ambient temperature chart	Used to determine correction dimension for various temperatures when setting latch no. 5.
521	Roll pin	Used as a directional indicator to determine position of locator pin (details 321, 408, and 465).
545	Nosepiece	Used with 74D110312 drill motor and lock bushing (detail GM, GN, GP) for drilling attachment holes in new 74A350814 side frame.

Figure 37. Replacement - Control Cam, Latch No. 5 (Sheet 7)

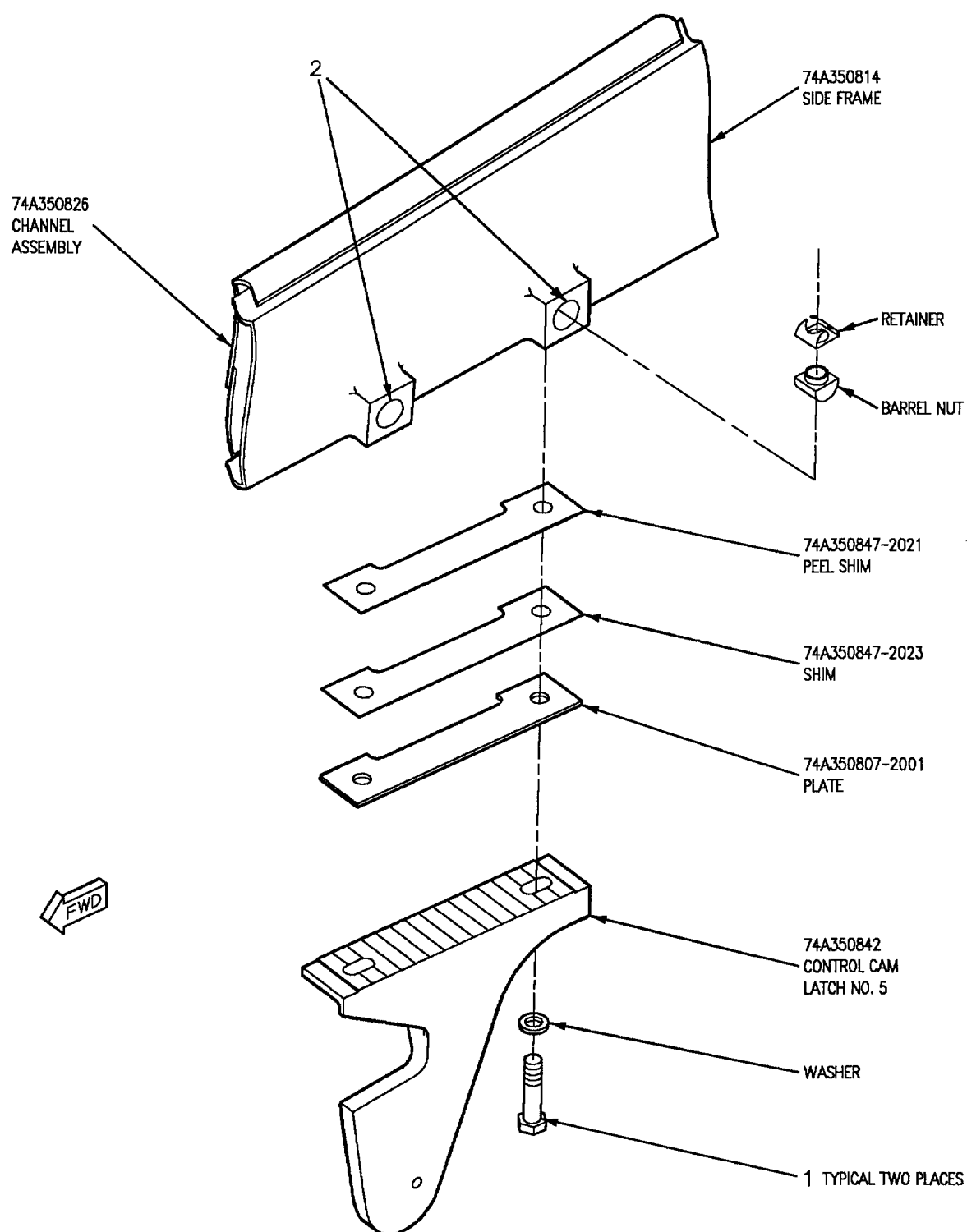


Figure 38. Control Cam, Latch No. 5, 74A350842, Fastener Index (Sheet 1)







INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 	FASTENER 	WASHER	SPACER BUSHING	RETAINER
1	799, 780, 783, 784	2	0.375 +0.007 -0.000	T.F.I.M.25.0202-160 0.1875 DRILL T.F.I.M.25.0202-248 0.3750 DRILL	NAS676V14 	AN960C616L		ST3M441-6M ST3M475C6
2	777, 778 781, 782		0.7190 +0.0005 -0.0010	SPT-74A350006 0.3750 DRILL SPT2-74A350006 0.7031 DRILL SPT3-74A350006 0.7190 REAMER				
<p style="text-align: center;">LEGEND</p> <p> For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07).</p> <p> Part of RE274350006-1 canopy repair kit.</p> <p> Torque fastener to 160 - 190 inch pounds.</p>								

Figure 38. Control Cam, Latch No. 5, 74A350842, Fastener Index (Sheet 2)

42. **LATCH NO. 6, 74A350808, RE-PLACEMENT.** See figure 39.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, F/A-18B Canopy	RE174350006-1
Repair Kit, Canopy	RE274350006-1
Torque Wrench, 5 to 150 Inch Pounds	-

Materials Required

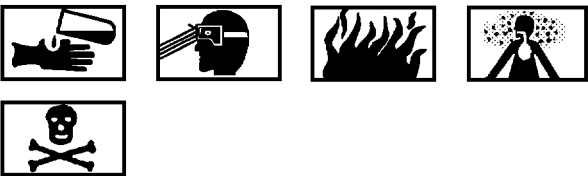
Nomenclature	Specification or Part Number
Barrier Material	MIL-B-131, Class 1
Cheesecloth	CCC-C-440, Type 1, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108
Isopropyl Alcohol	TT-I-735
Sealing Compound	MIL-S-22473, Grade AA
Shim, Peel	74A350747-2001 5052-H39 Alum Lam 0.094 x 1.10 x 4.10



To prevent damage to transparency, be sure barrier material is installed between transparency and ethyl foam. See canopy preparation (WP006 01).

43. REMOVAL.

- Load canopy into fixture (WP006 01).
- Remove four bolts attaching 74A350808 latch to 74A350814 side frame. See figure 40 for fastener and part location.
- Remove 74A350808 latch, 74A350706 plate, and 74A350747 shims from 74A350814 side frame.



Isopropyl Alcohol 2

- Clean area where latch was removed using clean cheesecloth moistened with isopropyl alcohol.

44. INSTALLATION.

- Raise lower fairing support locator (detail 332, 334) to locating position and install L-pin (detail 176). See detail A.
- Raise seal locator pin (details 321, 408, and 465) inside seal retainers and rotate until roll pin (detail 521) points forward or aft. See detail B.
- Secure seal locator pin (details 321, 408, and 465) by inserting L-pin (detail 207). See detail B.

NOTE

If drilling latch attach holes in new 74A350814 side frame, do steps below. If installing new latch to existing 74A350814 side frame, go to step h.

- Locate and drill latch attach holes in new 74A350814 side frame per steps below:

- Install clamp half (detail 269) onto rigging pad (detail 59, 60) and secure with thumbscrew (detail 39). See detail C.
- Install clamp half (detail 65) over edge of flange on 74A350814 side frame and secure to clamp half (detail 269) using allen screw (detail 268). See detail C.
- Rotate drill blanket (detail 63, 64) in position and secure by installing L-pin (detail 247). See detail C.
- At hole location 785 thru 788, left side, and 789 thru 792, right side:
 - Install traveler bushing (detail B1) in drill bushing (detail 519). See detail C.



Do not drill into 74A350823 lower fairing support.

(b) Drill 0.255 + 0.007 -0.000 inch diameter hole in 74A350814 side frame. See figure 40 for drilling information.

e. Remove L-pin (detail 247) and retract drill blanket (detail 63, 64). See detail C.

f. Loosen allen screw (details 268) and remove clamp half (detail 65). See detail C.

g. Loosen thumbscrew (detail 39) and remove clamp half (detail 269). See detail C.

h. Apply finish system to new 74A350808 latch, 74A350706 plates, and any other area requiring finish system touchup (A1-F18AC-SRM-500, WP021 00).

i. Install new 74A350808 latch per steps below:

(1) Position latch locator (detail 234) onto rigging pad (detail 59, 60) and secure with thumbscrew (detail 39). See detail D.

NOTE

74A350747 peel shims are optional and are installed only when needed to get correct fit of mating parts.

(2) Insert feeler gage between latch locator (detail 234) and outboard surface of 74A350814 side frame to determine thickness of 74A350747 peel shim. See detail E.

NOTE

Nominal gap is 0.094 inch.

(3) Peel 74A350747 shim to fit gap.

(4) Remove latch locator (detail 234).

(5) Position 74A350747 peel shims, 74A350706 plate, and 74A350808 latch inline with holes in 74A350814 side frame. Install bolt and washer into gang channel. See figure 40 for fastener information.

(6) Position latch locator (detail 239) onto rigging pad (detail 59, 60) by inserting L-pin (detail 426). See detail F.

NOTE

With L-pin (detail 426) installed, latch locator (detail 239) is located at 0.150 inch nominal dimension at 70° F. Temperatures above or below 70° F, remove L-pin (detail 426) and adjust latch locator (detail 239) to correspond with correction dimension on chart (detail 467). See details F, G, and H.

(7) Determine ambient temperature and select corresponding correction dimension from chart (detail 467). Adjust latch locator (detail 239) using feeler gage and secure with thumbscrew (detail 39). See detail G and H.

NOTE

Ambient temperature measurement is taken from lower surface of latch locator (detail 239) and upper surface of locator pin (detail 469). See detail G.

(8) Adjust 74A350808 latch in 74A350706 serrated plate until latch contacts locator dowel (detail 235). See detail G.

NOTE

Latch serrations are 0.031 inch between centers. Serrations in latch and plate must engage each other.

(9) Latch locator (detail 239) may be adjusted up or down a maximum of 0.016 inch from initial setting to engage latch and plate serrations.

(10) Inspect for 0.100 inch nominal gap between inboard surface of 74A350808 latch and outboard surface of latch locator (detail 239). Add 74A350747 peel shims as required to maintain 0.100 inch nominal gap. See detail G.



Sealing Compound

24

(11) Apply sealing compound to fastener threads and torque to 50-70 inch pounds (QA). See figure 40 for fastener information.

j. Apply finish system as required to repair area (A1-F18AC-SRM-500, WP021 00).

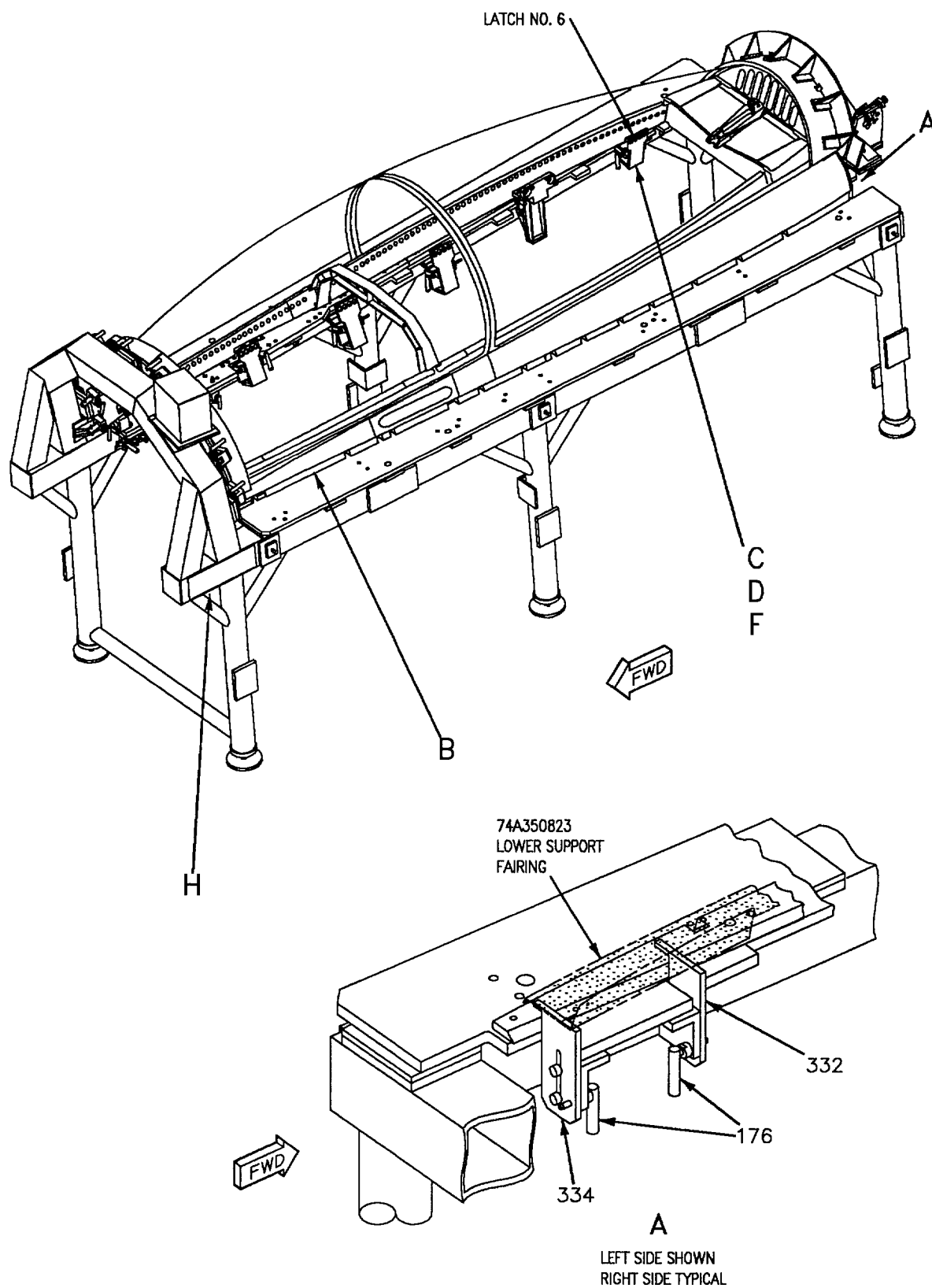


Figure 39. Replacement - Latch No. 6 (Sheet 1)

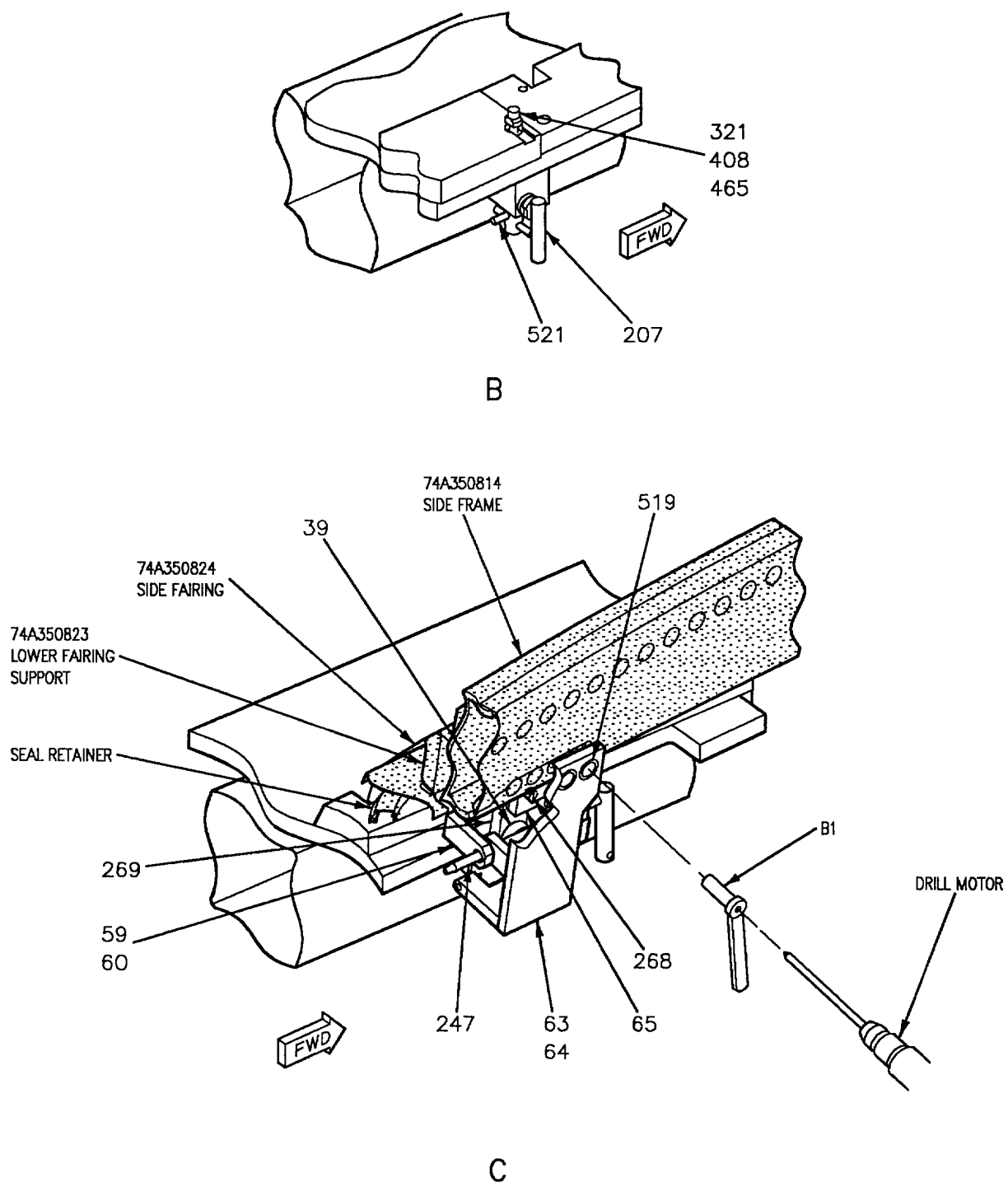


Figure 39. Replacement - Latch No. 6 (Sheet 2)

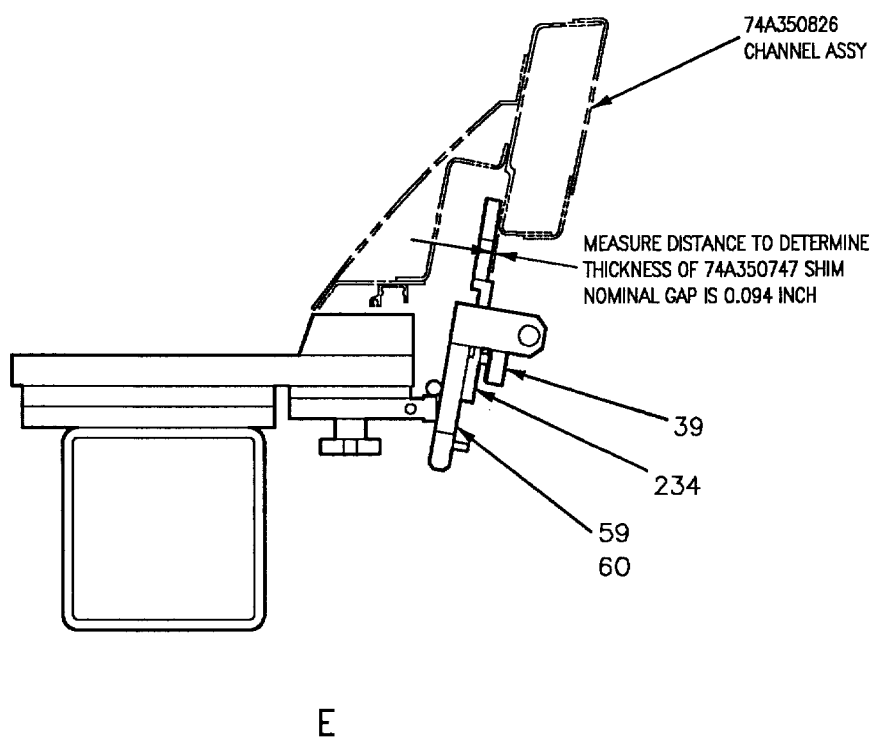
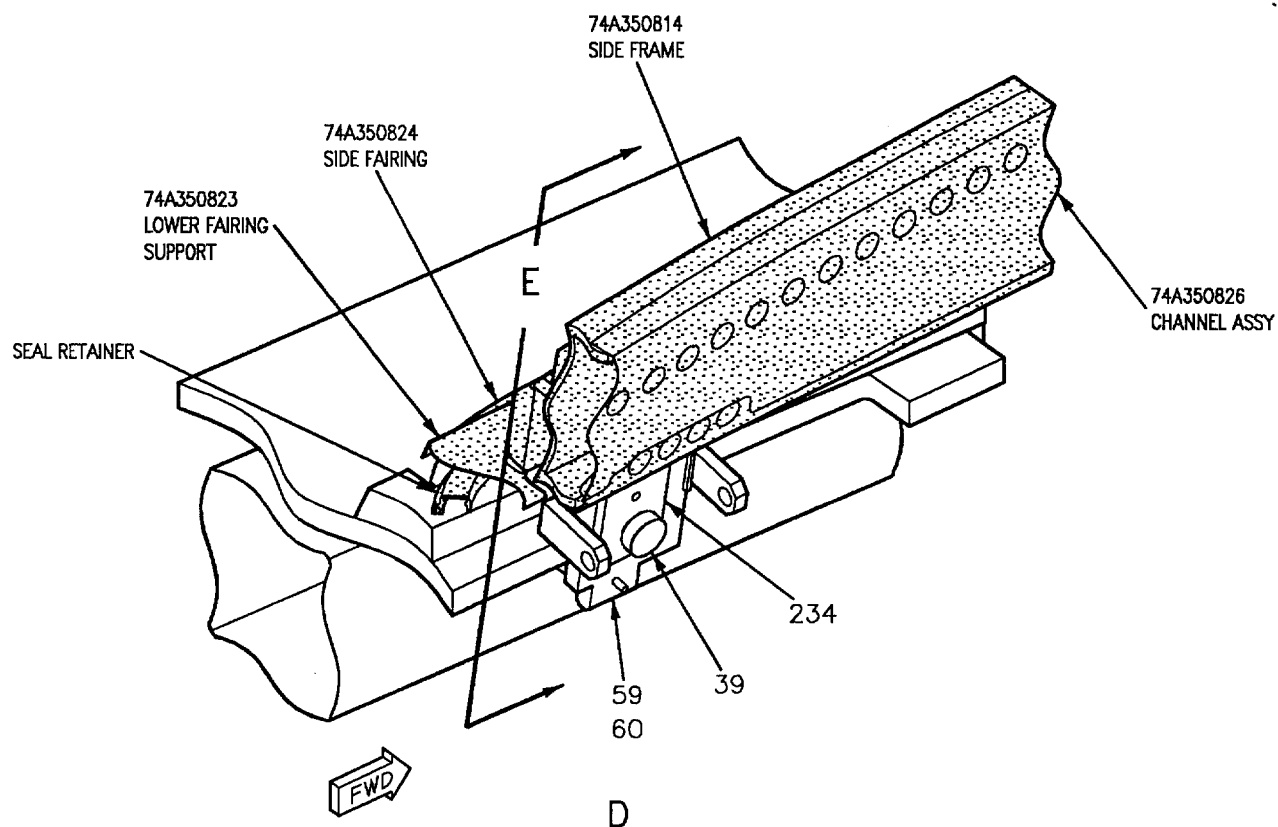


Figure 39. Replacement - Latch No. 6 (Sheet 3)

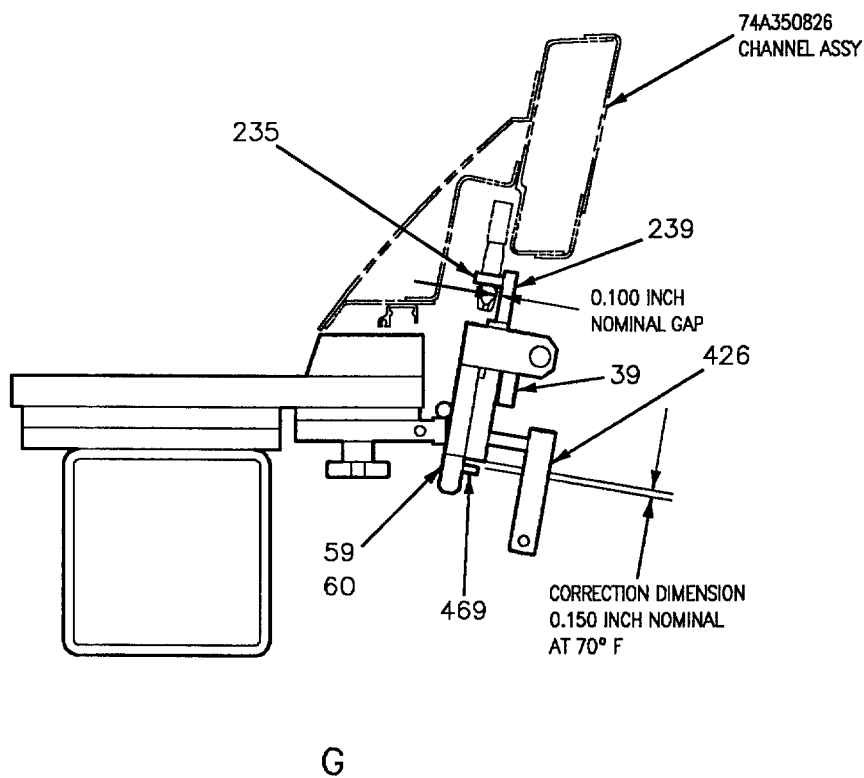
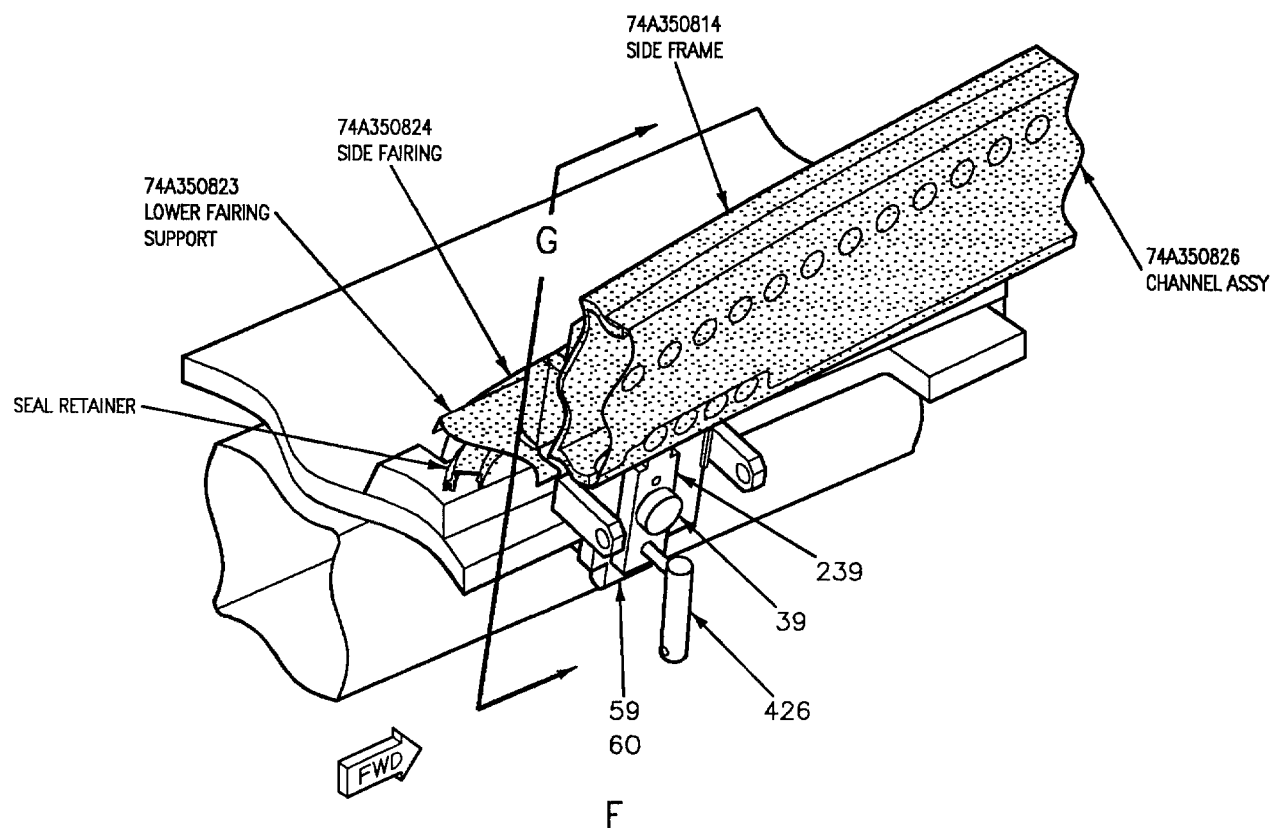



Figure 39. Replacement - Latch No. 6 (Sheet 4)

LATCH NO. 6	
AMBIENT TEMP. F°	CORRECTION DIMENSION
40°	0.111
45°	0.117
50°	0.123
55°	0.130
60°	0.136
65°	0.143
70°	0.150
75°	0.157
80°	0.165
85°	0.172
90°	0.178
95°	0.186
100°	0.193
105°	0.199
110°	0.206
115°	0.213
120°	0.218

467



H

Figure 39. Replacement - Latch No. 6 (Sheet 5)

DETAIL NO.	NAME	FUNCTION
B1	Traveler bushing	Guides 0.255 +0.007 -0.000 inch drill.
39	Thumbscrew	Secures clamp half (detail 269) and latch locator (detail 234, 239) to rigging pad (detail 59, 60).
59, 60	Rigging pad	Rigging pad for latch no. 6 containing attach points for latch locator (detail 234, 239) and clamp half (detail 269).
63, 64	Drill blanket	Locates latch no. 6 attachment holes in 74A350814 side frame at hole numbers 785 thru 792.
65	Clamp half	Used with clamp half (detail 269) to locate drill blanket (detail 63, 64).
176	L-pin	Locates lower fairing support locators (detail 332, 334) in position.
207	L-pin	Secures seal locator pin (details 321, 408, and 465) in locating position.
234	Latch locator	Used to determine correct shim thickness for latch no. 6.
235	Locator dowel	Used as a rigging stop to set latch no. 6.
239	Latch locator	Used to set latch no. 6 in correct Z plane location.
247	L-pin	Locates drill blanket (detail 63, 64) in correct X, Y, and Z plane location.
268	Allen screw	Secures clamp half (detail 268) to clamp half (detail 269).
269	Clamp half	Used with clamp half (detail 65) to locate drill blanket (detail 63, 64).
321	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location.
332, 334	Lower fairing support locators	Provides Z plane location at Y363.650.
408	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y283.488.
426	L-pin	Locates latch locator (detail 239) when ambient temperature is 70° F.
465	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y266.565, Y287.073, Y295.840, Y303.326, Y308.073, Y315.586, Y323.585, Y331.084, Y341.328, Y342.076, and Y350.452.

Figure 39. Replacement - Latch No. 6 (Sheet 6)

DETAIL NO.	NAME	FUNCTION
467	Ambient temperature chart	Used to determine correction dimension for various temperatures when setting latch no. 6.
469	Locator pin	Used as a reference point in measuring rigging dimension on latch no. 6.
519	Drill bushing	Guides traveler bushing (detail B1).
521	Roll pin	Used as a directional indicator to determine position of locator pin (details 321, 408, and 465).

Figure 39. Replacement - Latch No. 6 (Sheet 7)

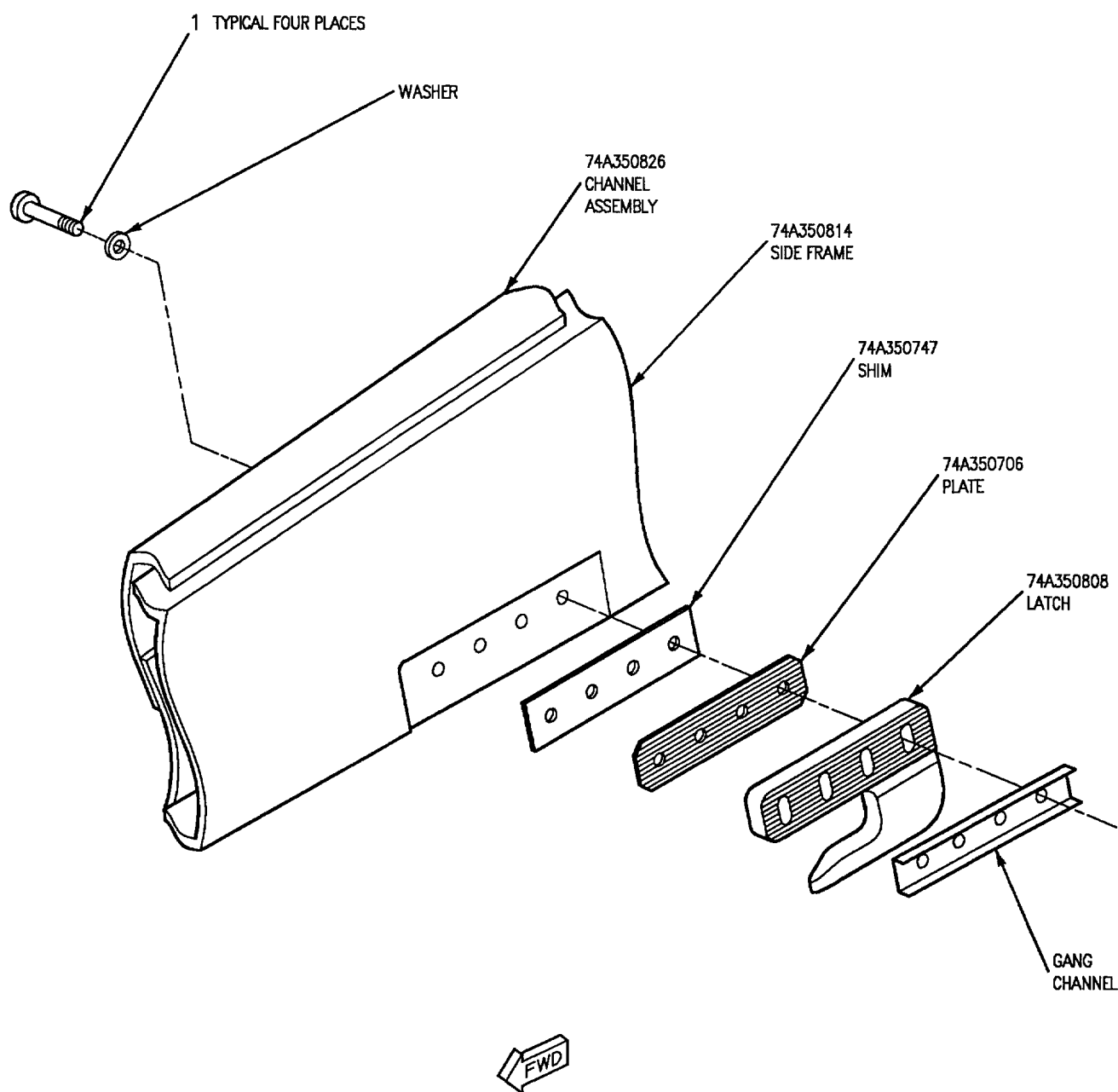


Figure 40. Latch No. 6, 74A350808, Fastener Index (Sheet 1)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 2	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1	785 THRU 792	4	0.255 +0.007 -0.000	T.F.I.M.25.0204158 0.2570 DRILL	ST3M747-4-14 3	AN960C416L		3M464N8A4-2
<p style="text-align: center;">LEGEND</p> <p>1 For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07).</p> <p>2 Part of RE274350006-1 canopy repair kit.</p> <p>3 Torque fastener to 50 - 70 inch pounds.</p>								

Figure 40. Latch No. 6, 74A350808, Fastener Index (Sheet 2)

45. **HINGE, 74A350835, INSPECTION AND REPLACEMENT.** See figure 41.



Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Maintenance Fixture, F/A-18B Canopy	RE174350006-1
Repair Kit, Canopy	RE274350006-1

Materials Required

Nomenclature	Specification or Part Number
Adhesive	EA934
Barrier Material	MIL-B-131, Class 1
Cheesecloth	CCC-C-440, Type 1, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108
Isopropyl Alcohol	TT-I-735
Pivot Stop	74A350874-2003
Sealing Compound	MIL-S-83430, Class A-1/2
Shim, Peel	74A350847-2009 5052-H39 Alum Lam 0.032 x 1.00 x 2.00
Shim, Peel	74A350847-2011 5052-H39 Alum Lam 0.032 x 1.25 x 3.12
Shim, Peel	74A350847-2017 5052-H39 Alum Lam 0.048 x 1.05 x 2.06
Shim, Peel	74A350847-2019 5052-H39 Alum Lam 0.032 x 1.06 x 2.14
Stop	74A350838-1001

To prevent damage to transparency, be sure barrier material is installed between transparency and ethyl foam. See canopy preparation (WP006 01).

46. INSPECTION.

a. Load canopy into fixture (WP006 01).

b. Raise seal locator pin (details 321, 408, and 465) inside seal retainers and rotate until roll pin (detail 521) points forward or aft. See detail A.

c. Secure seal locator pin (details 321, 408, and 465) by inserting L-pin (detail 207). See detail A.

d. Engage T-pin (detail 110) to locating position and secure by inserting L-pin (detail 120) nine places. See detail C.

e. Slide canopy assembly forward until 74A350801 arch is net to arch locators (detail 138). See detail B.

f. Install latch pin (detail 355) into latch no. 1. See detail A.

g. If canopy assembly will not slide forward and/or latch pin (detail 355) cannot be inserted, do steps below:

(1) Remove L-pin (detail 207) and rotate seal locator pin (detail 321, 408, and 465) until roll pin (detail 521) points outboard. See detail A.

(2) Secure seal locator pin (details 321, 408, and 465) by installing L-pin (detail 207). See detail A.

(3) Slide canopy assembly forward until 74A350801 arch is net to arch locator (detail 138). See detail B.

(4) Install recycle latch pin (detail 531) into latch no. 1. See detail A.

h. Position hook end of locator (detail 217) over spacer (detail 214) resting pin (detail 208) on upper surface of hinge support (detail 25, 26). See detail D.

i. Insert spacer (detail 215) in slot at aft end of 74A350835 hinges. See detail D.

j. Position backing plate (detail 474) on inboard surface of hinges inserting pins (details 216, 477) thru 74A350835 hinge and engage in spacer (detail 214), locator (detail 217), and hinge support (detail 25, 26). See detail D.

k. Install thumbscrew (details 475 and 476) to hold assembly in place. See detail D.

l. Inspect for 0.125 inch nominal gap between outboard surface of 74A350835 hinge and inboard surface of locator (detail 217). Typical on each hinge. See detail E.

m. Install step pin (detail 348) thru bushing (detail 219) located in hinge support (detail 25, 26). See detail D.

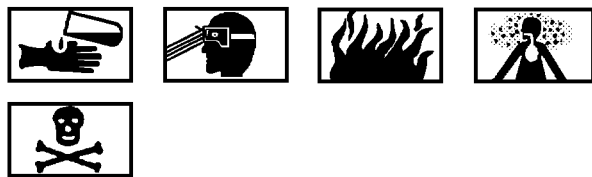
n. Inspect for 0.125 inch nominal gap between small diameter on step pin (detail 348) and lobe surface of 74A350835 hinge. See detail F.

o. Replace 74A350835 hinge and 74A350874 pivot stop if damaged or nominal dimensions are exceeded.

47. REPLACEMENT.

a. Remove fasteners attaching 74A350835 hinge to 74A350814 side frame, 74A350815 splice plate, 74A350827 fairing, 74A350828 forward beam, 74A350829 aft beam, 74A350834 deck plate, 74A350841 angle, and 74A350844 bulkhead. See figure 42 for fastener location.

b. Remove damaged 74A350835 hinge and 74A350847 shims.



Isopropyl Alcohol

2

c. Clean all residual sealant from area where 74A350835 hinge was removed using plastic scraper and cheesecloth moistened with isopropyl alcohol.

d. Locate new 74A350835 hinge and 74A350874 pivot stop:

(1) Position new 74A350835 hinge and new 74A350874 pivot stop in approximate location with mating structure.

(2) Position hook end of locator (detail 217) over spacer (detail 214) resting pin (detail 208) on upper surface of hinge support (detail 25, 26). See detail D.

(3) Insert spacer (detail 215) in slot at aft end of 74A350835 hinge. See detail D.

(4) Position backing plate (detail 474) on inboard surface of hinges inserting pins (details 216, 477) thru 74A350835 hinge and engage in spacer (detail 214), locator (detail 217), and hinge support (detail 25, 26). See detail D.

(5) Install 0.125 inch depot furnished shim between outboard surface of 74A350835 hinge and inboard surface of locator (detail 217). See detail E.

(6) Install step pin (detail 348) thru bushing (detail 219) located in hinge support (detail 25, 26). See detail D.

(7) Adjust 74A350835 hinge until lobe is net to full size shank on step pin (detail 348). See detail F.

(8) Use inspection sight hole in hinge support (detail 25, 26) to verify 74A350874 pivot stop is net to forward surface of pin (detail 473). See details D and E.

(9) Install hinge locator (detail 90, 91) by inserting dowel pin (detail 460) into bushing and secure by installing handknob (detail 459). See detail G.

(10) Install 0.125 inch depot furnished shim between hinge locating button (detail 458) and 74A350835 hinge arm. See detail H.

(11) Install thumbscrews (details 475 and 476) to secure hinge in place. See detail D.

NOTE

74A350847 shims are installed only when needed to maintain proper fit between 74A350835 hinge and mating structure.

(12) Install 74A350847 peel ply shims as required between 74A350835 hinge and mating structure. See figure 42 for shim location.



Use care when back drilling not to elongate holes in mating structure.

e. Locate and drill holes in new 74A350835 hinge using existing holes in 74A350814 side frame, 74A350815 splice plate, 74A350827 fairing, 74A350828 forward beam, 74A350829 aft beam, 74A350834 deck plate, 74A350841 angle, and 74A350844 bulkhead as guide. See figure 42 for hole diameters and drilling information.

f. At hole locations 383 thru 386 left side and 387 thru 390 right side:

(1) Insert traveler bushing (detail E1) into drill bushing (detail 199). See detail D.

NOTE

T.F.I.M.25.0202-164 is part of RE274350006-1 canopy tool kit.

(2) Install T.F.I.M.25.0202-164 drill on hand drill motor and drill 0.191 inch diameter hole in 74A350835 hinge and 74A350874 pivot stop. See figure 42 for additional drilling information.

g. Remove 74A350835 hinge, 74A350874 pivot stop, and 74A350847 shims.

h. Countersink holes in 74A350874 pivot stop to flushness requirement of fastener. See figure 42 for hole location.

i. Install plate nuts and gang channel on 74A350835 hinge. See figure 42 for fastener information.



Adhesive

26

j. Bond 74A350838-1001 stop on 74A350835 hinge using EA934 adhesive. For adhesive preparation and application (A1-F18AC-SRM-200, WP011 00). See figure 42 for part location.

k. Apply finish system to new 74A350835 hinge, 74A350874 pivot stop, and any other area requiring finish system touchup (A1-F18AC-SRM-500, WP021 00).



Sealing Compound

7

l. Fay surface seal interfacing surfaces on 74A350835 hinge, 74A350874 pivot stop, and mating structure. For sealant preparation and application (A1-F18AC-SRM-200, WP011 00).

m. Wet install fasteners securing 74A350835 hinge and 74A350844 shims to mating structure. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 42.

n. Wet install fasteners securing 74A350874 pivot stop to 74A350835 hinge. For fastener sealing (A1-F18AC-SRM-200, WP011 00). For fastener information, figure 42.

o. Apply finish system, as required, to repair area (A1-F18AC-SRM-500, WP021 00).

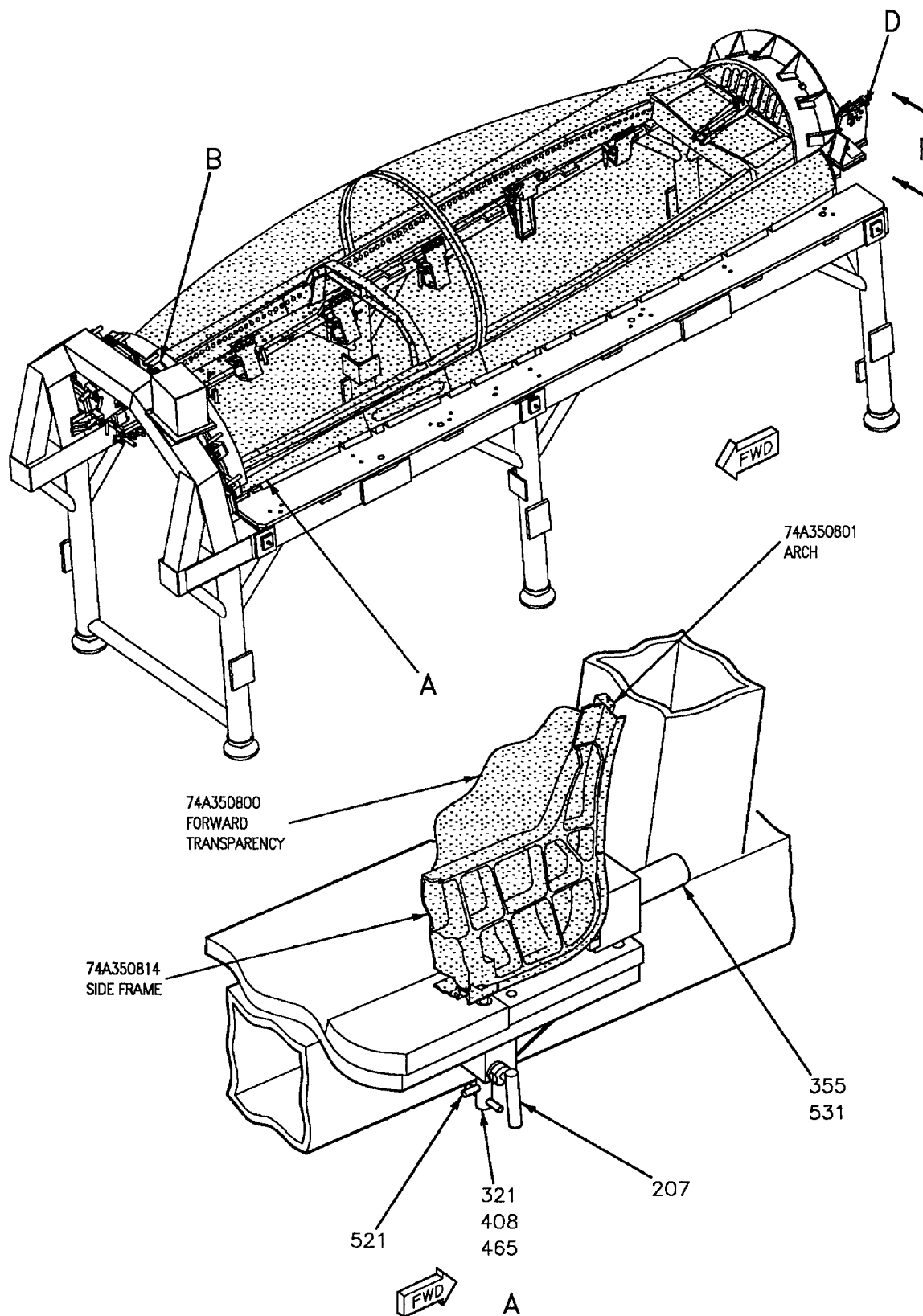


Figure 41. Replacement - Hinge (Sheet 1)

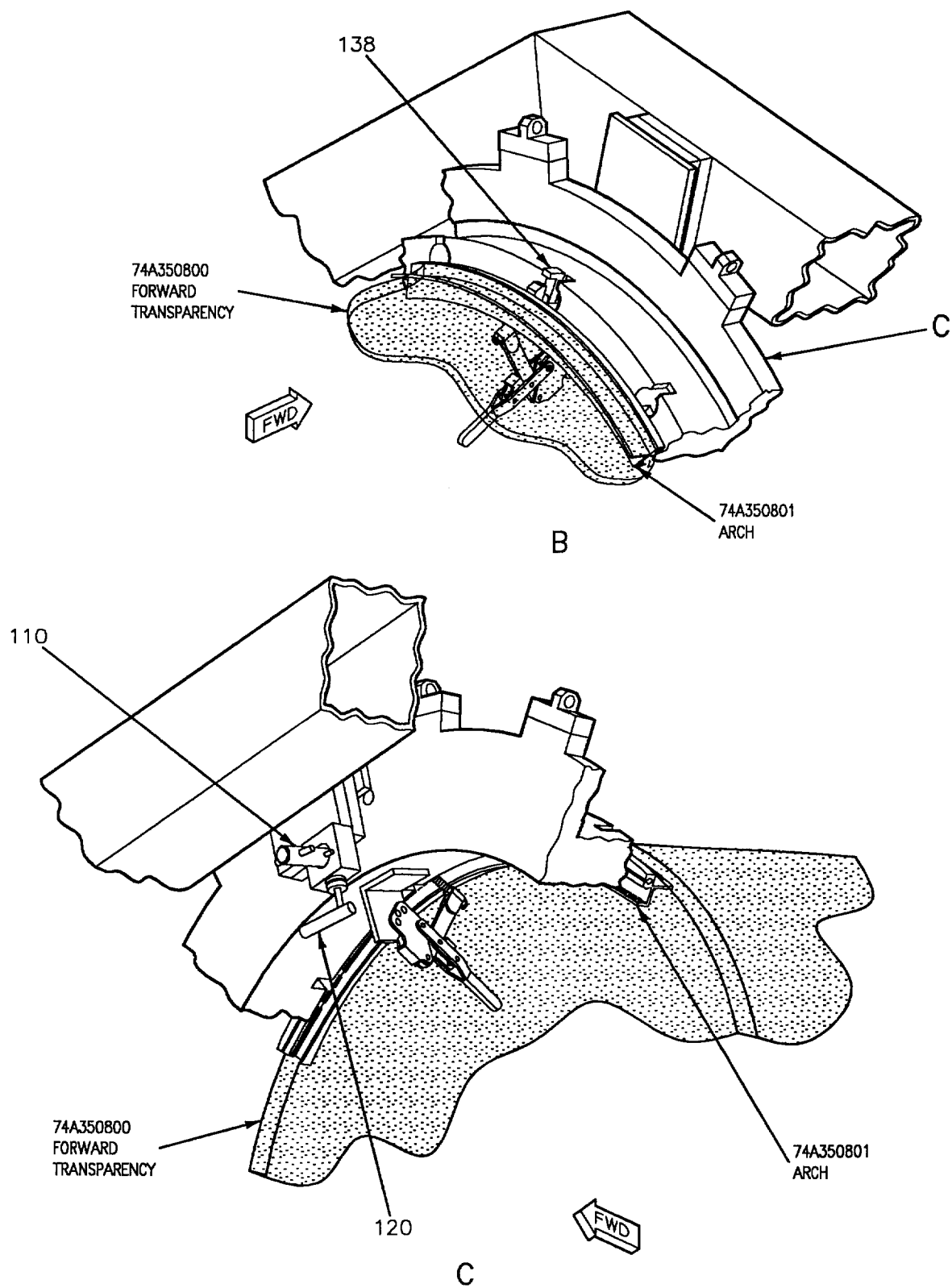


Figure 41. Replacement - Hinge (Sheet 2)

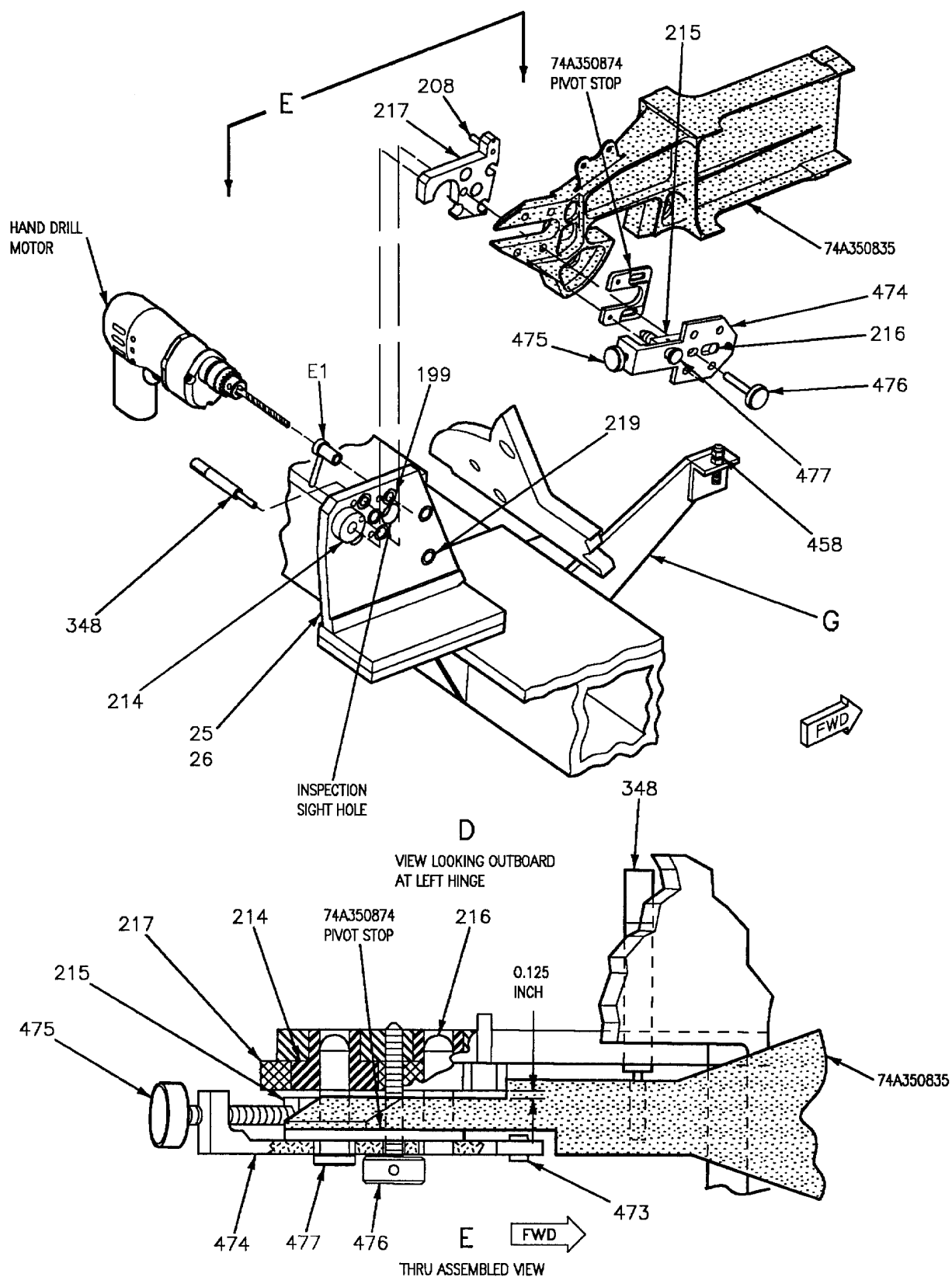


Figure 41. Replacement - Hinge (Sheet 3)

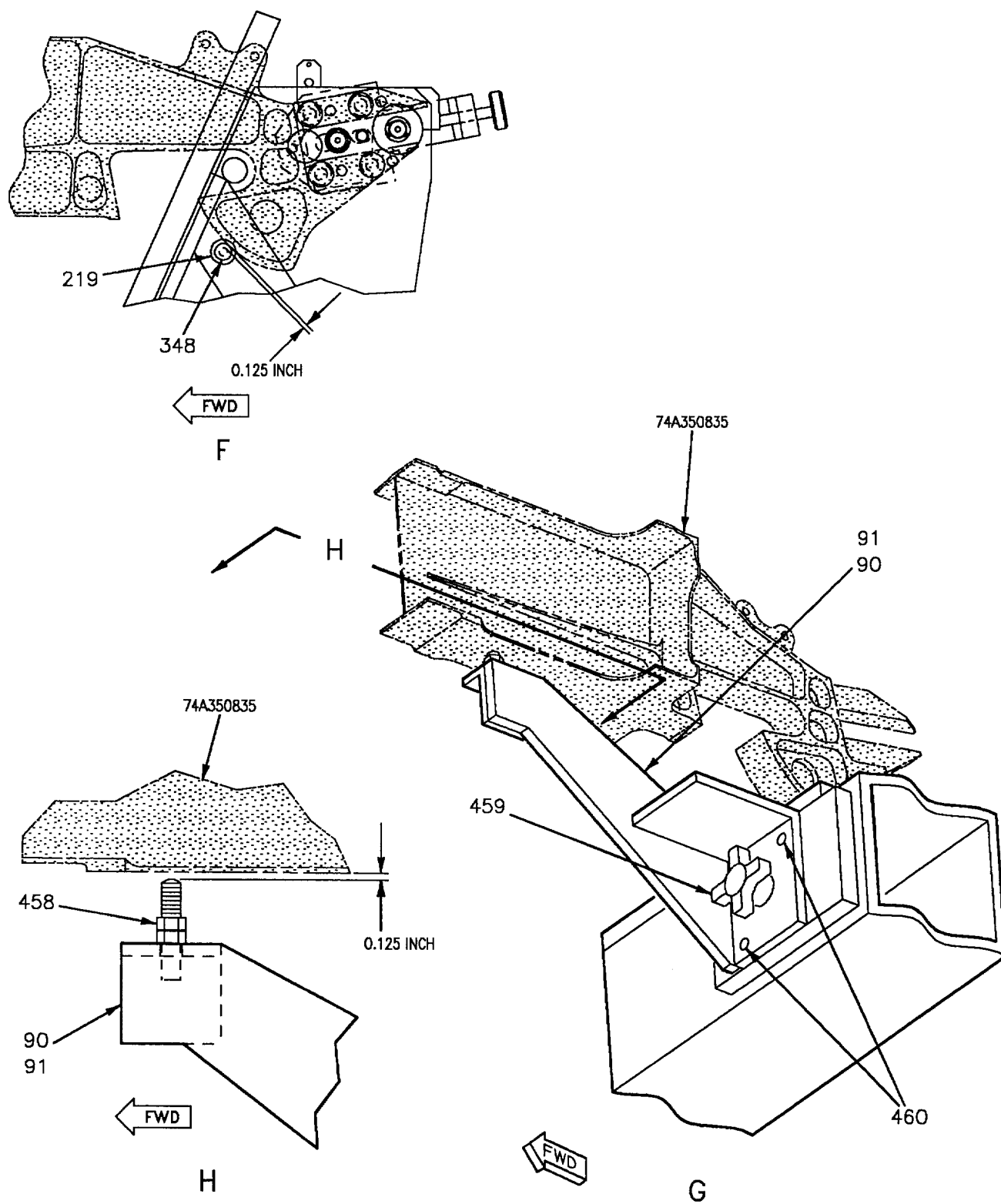


Figure 41. Replacement - Hinge (Sheet 4)

DETAIL NO.	NAME	FUNCTION
E1	Traveler bushing	Guides 0.191 inch diameter drill.
25, 26	Hinge support	Provides attachment points for hinge locators.
90, 91	Hinge locator	Provides 0.125 inch nominal gap inspection for 74A350835 hinge arm.
110	T-pin	Supports and positions arch locator (detail 138).
120	L-pin	Retains T-pin (detail 110) in position.
138	Arch locator	Locates 74A350801 canopy arch on casting (detail 105).
199	Drill bushing	Locates traveler bushing (detail E1) at hole location 383 thru 390.
207	L-pin	Secures seal locator pins (details 321, 408, and 465) in locating or clearance fit position.
208	Pin	Positions locator (detail 217) in correct location.
214	Spacer	Positions locator (detail 217) and provides pinning location for pin (details 216, 477).
215	Spacer	Inserts into slot of 74A350835 hinge.
216, 477	Pin	Locates backing plate (detail 474).
217	Locator	Provides equal gap reference between 74A350835 hinge and locator.
219	Bushing	Guides step pin (detail 348).
321	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location.
348	Step pin	Provides 0.125 inch nominal gap or net reference for inspecting or locating hinge.
355	Latch pin	Inserts into latch no. 1 when inspection of hinge is required.
408	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y283.488.
458	Hinge locating button	Provides 0.125 inch nominal gap inspection for 74A350835 hinge arm.
459	Handknob	Secures hinge locator (detail 90, 91) to fixture.
460	Dowel pin	Locates hinge locator (detail 90, 91) to fixture.

Figure 41. Replacement - Hinge (Sheet 5)

DETAIL NO.	NAME	FUNCTION
465	Seal locator pin	Locates seal retainer and positions canopy in X and Z plane location at Y266.565, Y287.073, Y295.840, Y303.326, Y308.073, Y315.586, Y323.585, Y331.084, Y341.328, Y342.076, and Y350.452.
473	Pin	Locates 74A350874 pivot stop in correct position.
474	Backing plate	Locates 74A350835 hinge to hinge support (detail 25, 26).
475, 476	Thumbscrew	Secures 74A350835 hinge to hinge support (detail 25, 26).
521	Roll pin	Used as a directional indicator to determine position of seal locator pins (details 321, 408, and 465).
531	Recycle latch pin	Inserts into latch no. 1 when latch pin (detail 355) cannot be inserted.

Figure 41. Replacement - Hinge (Sheet 6)

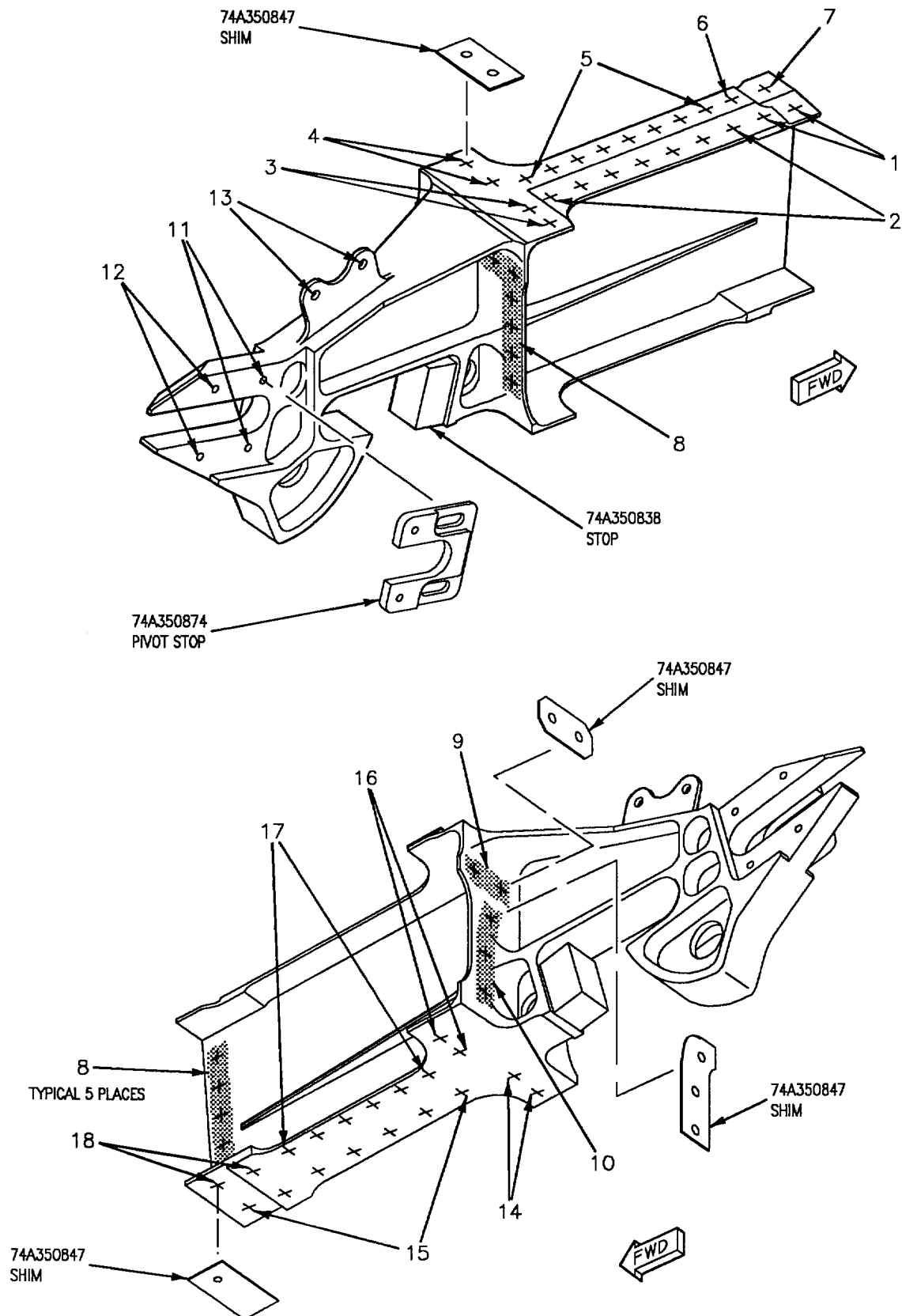


Figure 42. Hinge, 74A350835, Fastener Index (Sheet 1)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 2	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
1		2	0.1895 +0.0025 -0.0000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0201090 0.1770 DRILL T.F.I.M.25.1161897 0.1897 REAMER	ST3M759V3-5			ST3M525N3 ME
2		7	0.1895 +0.0025 -0.0000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0201090 0.1770 DRILL T.F.I.M.25.1161897 0.1897 REAMER	ST3M759V3-4			ST3M525N3 ME
3		2	0.1895 +0.0025 -0.0000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0201090 0.1770 DRILL T.F.I.M.25.1161897 0.1897 REAMER	ST3M759V3-6			ST3M525N3 ME
4		2	0.2495 +0.0025 -0.0000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0201130 0.2344 DRILL T.F.I.M.25.1162497 0.2497 REAMER	ST3M759C4-6			ST3M526C4M
5		8	0.1895 +0.0025 -0.0000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0201090 0.1770 DRILL T.F.I.M.25.1161897 0.1897 REAMER	ST3M759C3-4			ST3M526C3M
6		1	0.1895 +0.0025 -0.0000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0201090 0.1770 DRILL T.F.I.M.25.1161897 0.1897 REAMER	ST3M759C3-5			ST3M526C3M
7		1	0.2495 +0.0025 -0.0000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0201130 0.2344 DRILL T.F.I.M.25.1162497 0.2497 REAMER	ST3M759C4-5			ST3M526C4M
8		11	0.192 +0.006 -0.000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0201106 0.1960 DRILL	ST3M676-6-8			

Figure 42. Hinge, 74A350835, Fastener Index (Sheet 2)










INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 	FASTENER 	WASHER	SPACER BUSHING	RETAINER
9		2	0.2495+0.0025 -0.0000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0201130 0.2344 DRILL T.F.I.M.25.1162497 0.2497 REAMER	ST3M759C4-8			ST3M526C4M
10		3	0.2495+0.0025 -0.0000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0201130 0.2344 DRILL T.F.I.M.25.1162497 0.2497 REAMER	ST3M759C4-9			ST3M526C4M
11	383, 385, 387, 389	2	0.191 +0.006 -0.000	T.F.I.M.25.0202164 0.191 DRILL 	NAS673V14	AN960C10 	NAS43DD3-10	NAS1291C3M
12	384, 386, 388, 390	2	0.191 +0.006 -0.000	T.F.I.M.25.0202164 0.191 DRILL 	NAS1672- 3L14 			
13		2	0.255 +0.007 -0.000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0253355 0.2559 DRILL	NAS674V4	AN960C416L 		NAS1291C4M
14		2	0.1895+0.0025 -0.0000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0201090 0.1770 DRILL T.F.I.M.25.1161897 0.1897 REAMER	ST3M760V3-5			ST3M526C3M
15		7	0.161 +0.005 -0.000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0201080 0.1610 DRILL	MS20426AD5			
16		2	0.191 +0.006 -0.000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0201102 0.1910 DRILL	ST3M455- 3L4-1			ST3M463N6A5- 2 
17		6	0.191 +0.006 -0.000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0201102 0.1910 DRILL	ST3M455- 3L4-1			ST3M463N7A6- 2 
18		2	0.191 +0.006 -0.000	T.F.I.M.25.0201056 0.1285 PILOT T.F.I.M.25.0201102 0.1910 DRILL	ST3M455- 3L6-1			ST3M443-3A2 

Figure 42. Hinge, 74A350835, Fastener Index (Sheet 3)

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO. 2	FASTENER 1	WASHER	SPACER BUSHING	RETAINER
LEGEND								
1								
2								
3								
4								
5								
6								

1 For oversize repair fasteners (A1-F18AC-SRM-200, WP004 07).

2 Part of 74D110325-1001 aircraft structure repair tool kit (A1-F18AC-SRM-200, WP004 16).

3 Part of RE274350006-1 canopy repair kit.

4 Two required. Install one under bolt head and one under nut.

5 Install gang channel and/or plate nut using ST3M667-0306 rivets. Hole diameter for rivet is 0.093 +0.005 -0.000 inch. Countersink hole to flushness requirement of rivet to bottom surface of 74A350835 hinge.

6 Countersink hole to flushness requirement of fastener to inboard surface of 74A350874 pivot stop.

Figure 42. Hinge, 74A350835, Fastener Index (Sheet 4)

48. **AFT FAIRING, 74A350825, AND AFT BULKHEAD, 74A350844, INSPECTION AND REPLACEMENT.** See figure 43.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Maintenance Fixture, Canopy, Two Place	RE174350006-1
Repair Kit, Canopy	RE274350006-1

Materials Required

Nomenclature	Specification or Part Number
Adhesive	RTV-106
Barrier Material	MIL-B-131, Class 1
Cheesecloth	CCC-C-440, Type 1, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1
Methyl Ethyl Ketone	TT-M-261
Sealing Compound	MIL-S-83430, Class A-1/2

49. **INSPECTION.**



To prevent damage to transparency, be sure barrier material MIL-B-131 remains between transparency and ethyl foam cushioning material.

- a. Make sure canopy is loaded correctly and secure (WP006 01).
- b. Position trim board (detail 201) on fixture by inserting L-pin (detail 555) two places and installing handknob (detail 260) four places, detail A.
- c. Slide locator (detail 202, 203, 204) forward through cutouts in trim board (detail 201) and secure by installing L-pin (detail 556), detail B.
- d. Inspect for 0.125 inch gap between locator (detail 202, 203, 204) and flanges of aft fairing and aft bulkhead using nominal feeler check gage, detail B.
- e. Check mold line contour of aft fairing.

(1) Insert 0.110 inch diameter “GO” side of gage (detail J1) between upper surface of canted plate (detail 200) and inner surface of aft fairing to check that minimum allowable gap has not been exceeded, detail C.

(2) Try to insert 0.155 inch diameter “NO-GO” side of gage (detail J1) between upper surface of canted plate (detail 200) and inner surface of aft fairing to check that maximum allowable gap has not been exceeded, detail C.

f. Check aft trim of aft fairing.

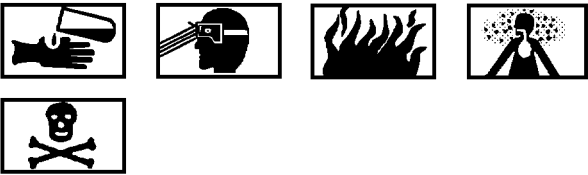
(1) Insert 0.220 inch diameter “GO” gage (detail 525) between trim board (detail 201) and aft edge of aft fairing to check that minimum allowable trim line gap has not been exceeded, detail D.

(2) Try to insert 0.280 inch diameter “NO-GO” gage (detail 526) between trim board (detail 201) and aft edge of aft fairing to check that maximum allowable trim line gap has not been exceeded, detail D.

g. Replace aft fairing or aft bulkhead if damaged or engineering tolerance is exceeded.

50. **REPLACEMENT.**

- a. Remove transparency (WP006 03).
- b. Remove fasteners attaching aft fairing to mating structure, see figure 44 for fastener location.
- c. Remove fasteners attaching aft bulkhead to mating structure, see figure 44 for fastener location.
- d. Remove damaged aft fairing and/or aft bulkhead.



Methyl Ethyl Ketone

5

- e. Clean all residual sealant from mating structure with a plastic scraper and cheesecloth moistened with methyl ethyl ketone.
- f. Position trim board (detail 201) on fixture by inserting L-pin (detail 555) two places and installing handknob (detail 260) four places, detail A.
- g. Slide locator (detail 202, 203, 204) forward through cutouts in trim board (detail 201) and secure by installing L-pin (detail 556), detail B.

h. Locate new aft fairing and/or aft bulkhead.

(1) Position forward flange of aft fairing into notches at end of locator (detail 202, 203, 204), detail B.

(2) Insert 0.125 inch shim (depot furnished) between locator (detail 202, 203, 204) and inner surface of aft fairing, detail B.

(3) Insert 0.125 inch shim (depot furnished) between canted plate (detail 200) and aft inner edge of aft fairing, detail B.

(4) Position aft bulkhead flange on top of forward flange of aft fairing and insert 0.125 inch shim (depot furnished) between locator (detail 202, 203, 204) and inner surface of aft bulkhead, detail B.

(5) Position lower surface of aft bulkhead net with upper surface of aft beam.

i. Remove trim board (detail 201) from fixture by removing L-pin (detail 555) two places and hand knobs (detail 260) four places, detail A.

j. Position drill blanket (detail 50) onto fixture by inserting L-pin (detail 556) six places and secure by installing handknob (detail 209) three places, detail F.

k. Visually check for proper location of aft fairing to 0.125 inch shim (depot furnished) on locator (detail 202, 203, 204) using three 1-inch diameter cut-outs in drill blanket (detail 50), detail E.

l. C-clamp aft end of aft fairing to 0.125 shim (depot furnished), to aft end of ML surface of canted plate (detail 200) five places, detail G.

m. Slide aft bulkhead closure aft until it lines up with locating surface of slot in drill plate (detail 50), two places.

n. At hole location 401 through 408.

(1) Insert traveler bushing (detail D1) in drill bushing (detail 50C), detail H.

(2) Install drill T.F.I.M. 25.0202-142 into hand drill motor.

(3) Drill 0.161 inch diameter hole. See figure 44 for hole location and drilling information.

o. At hole location 393 through 400 and 409 through 416.

(1) Insert traveler bushing (detail C1) in drill bushing (detail 50C), detail J.

(2) Install drill T.F.I.M. 25.0204-074 into hand drill motor.

(3) Drill 0.1285 inch diameter hole. See figure 44 for hole location and drilling information.

p. Position scribe (detail 346) against drill blanket (detail 50) and on new aft fairing, detail K.

q. Scribe trim line in new aft fairing by applying enough pressure to make sure scribe remains flat on trim board.

r. Remove aft fairing and trim to scribed lines.

s. Apply finish system (A1-F18AC-SRM-500, WP021 00).



Sealing Compound

7

t. Fay surface seal between aft bulkhead and mating structure, using sealing compound MIL-S-83430 (A1-F18AC-SRM-200, WP011 00).

u. Fay surface seal between aft fairing and mating structure (A1-F18AC-SRM-200, WP011 00).

v. Wet install permanent fasteners, see figure 44 and (A1-F18AC-SRM-200, WP011 00).

w. Install removable fasteners, see figure 44.

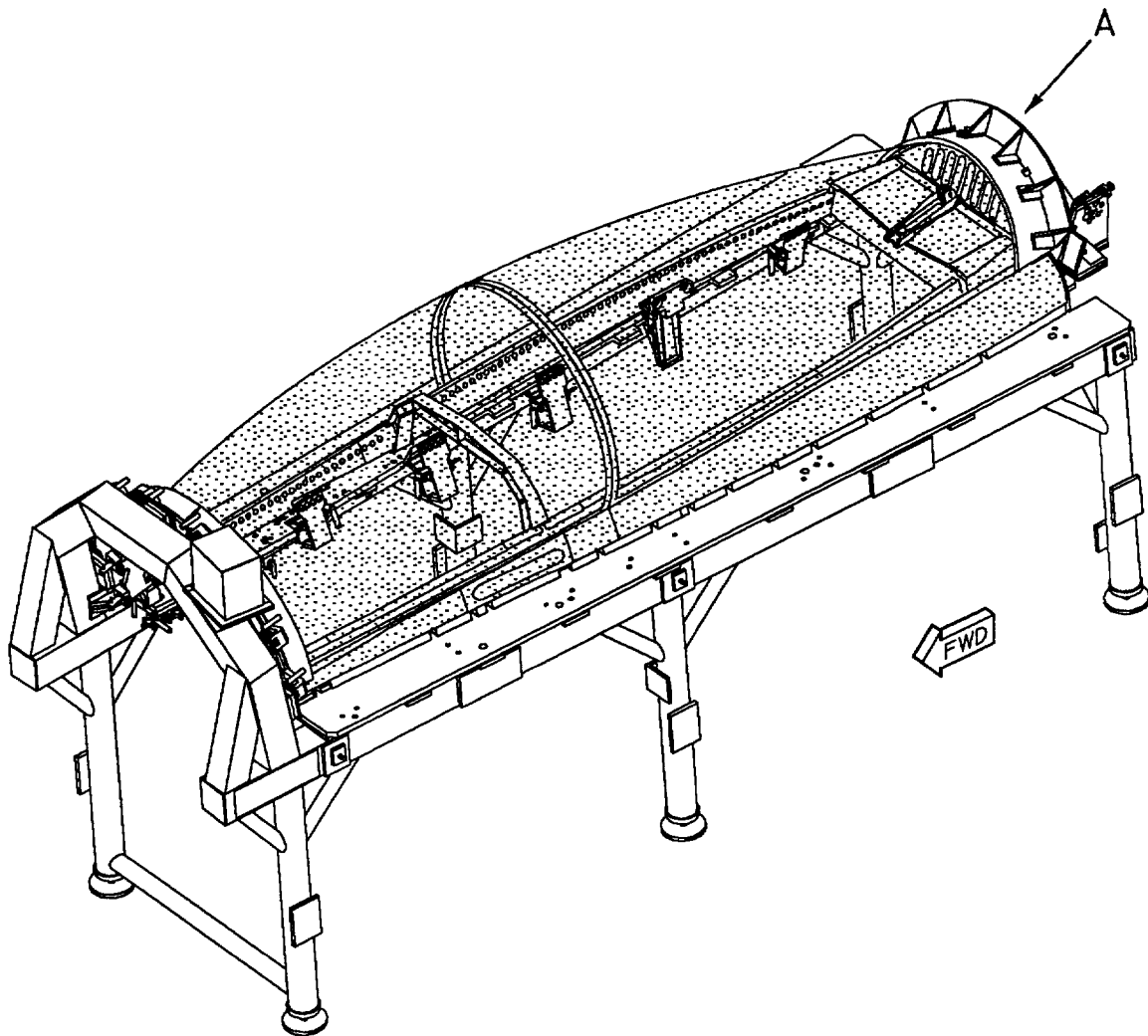


Adhesive

12

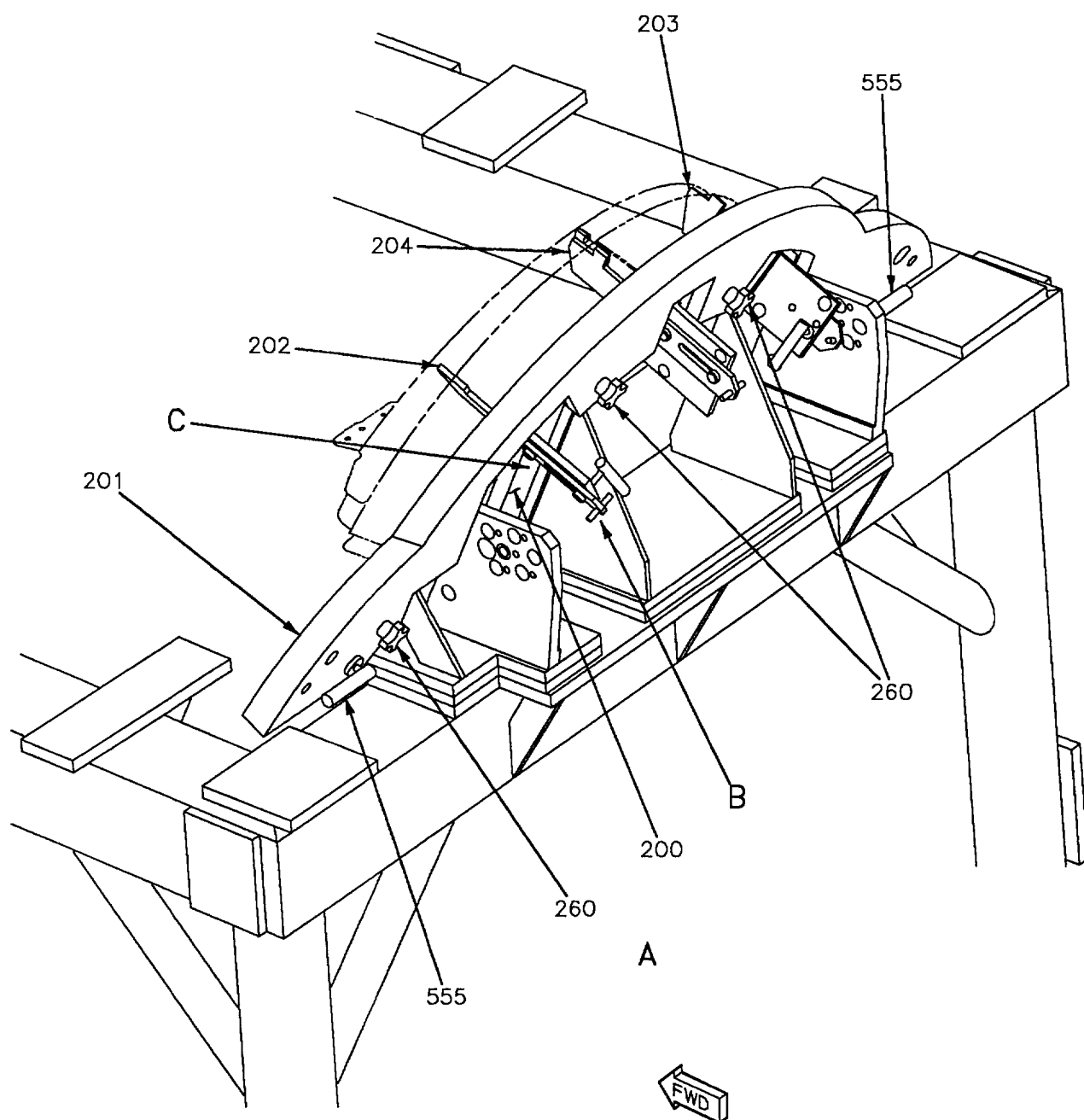
x. Bond 74A350004 silicone rubber strip to aft bulkhead using RTV106 adhesive.

y. Install transparency (WP006 03).



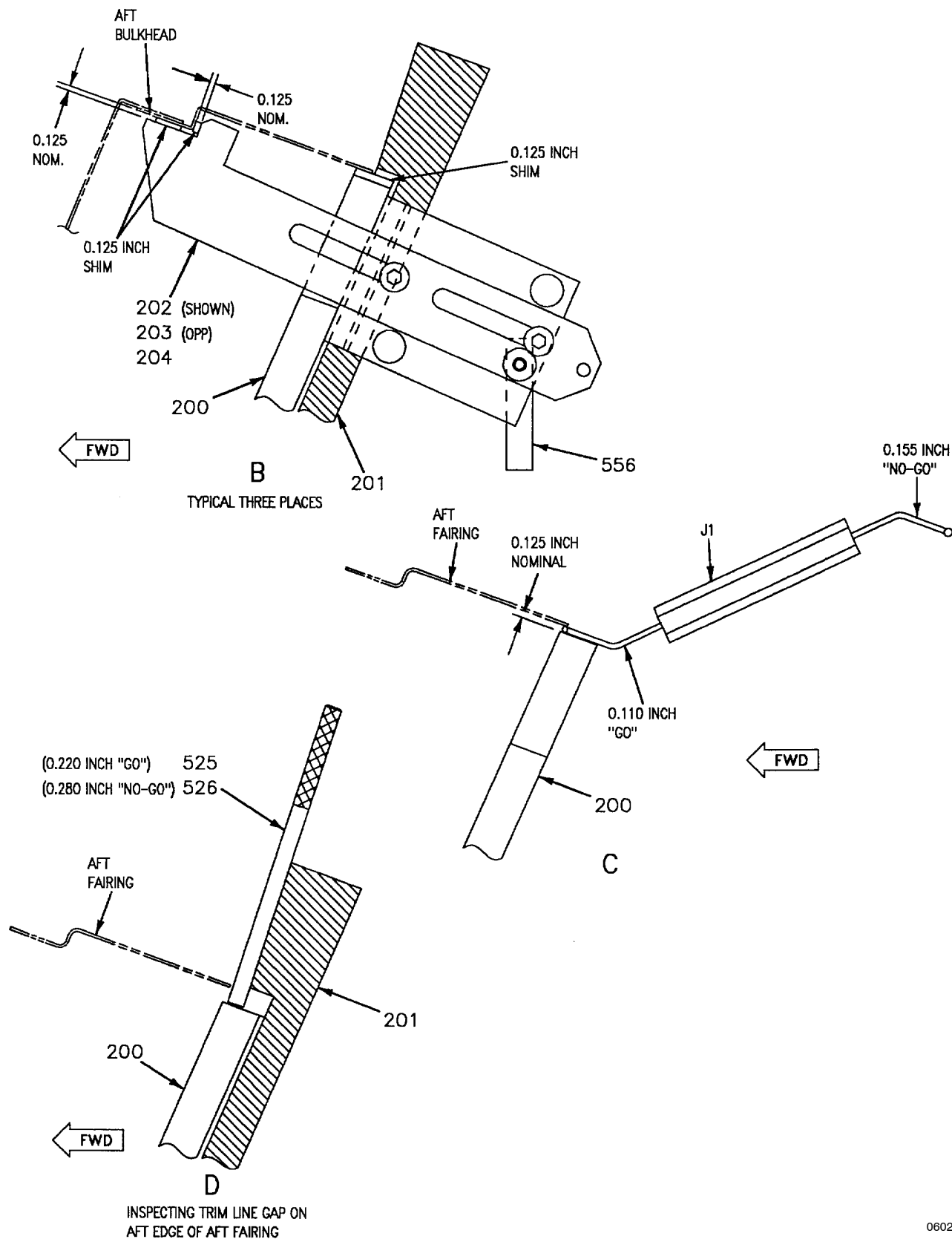
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Figure 43. Inspection or Replacement - Aft Fairing and Aft Bulkhead (Sheet 1)



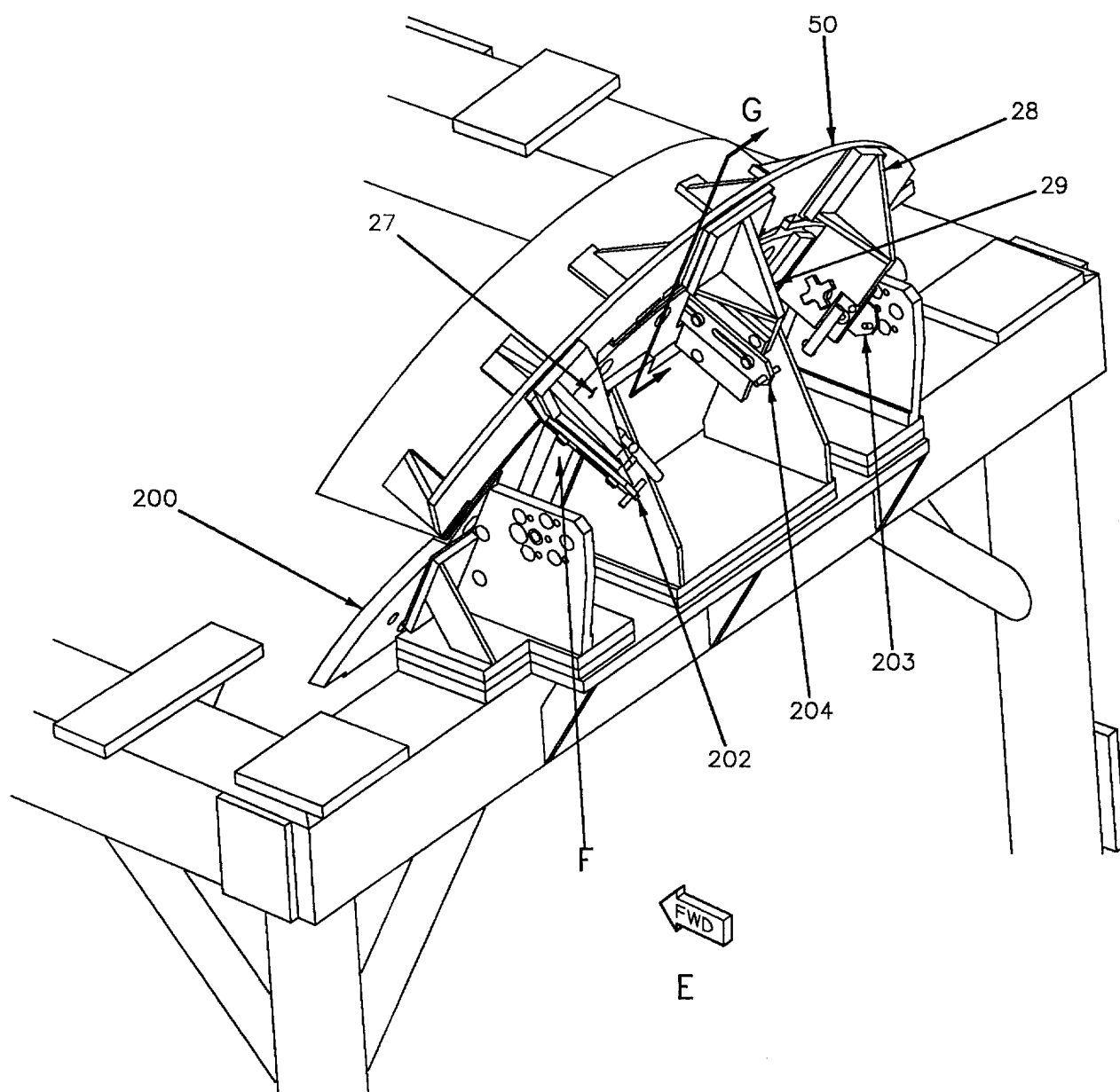
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Figure 43. Inspection or Replacement - Aft Fairing and Aft Bulkhead (Sheet 2)



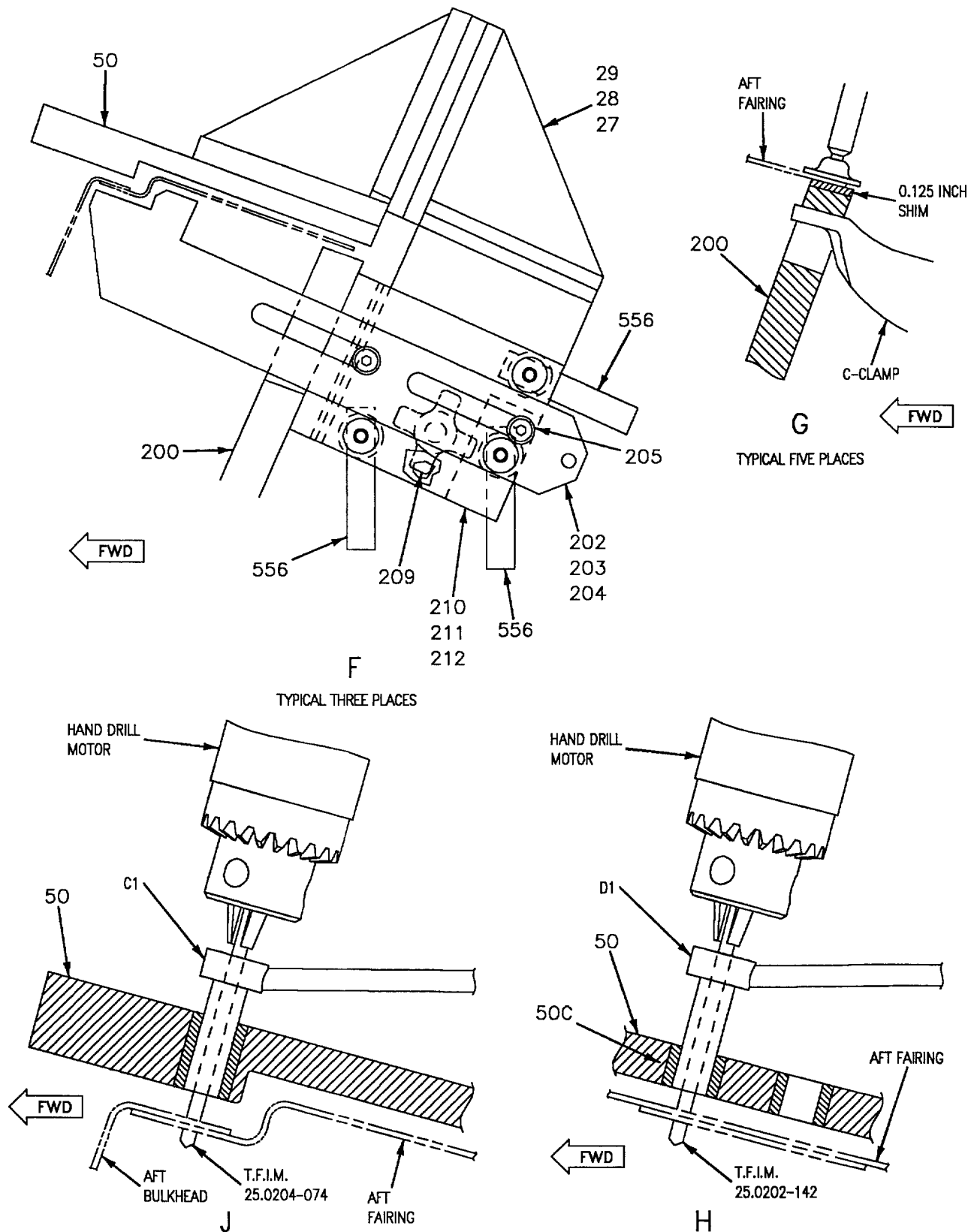
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Figure 43. Inspection or Replacement - Aft Fairing and Aft Bulkhead (Sheet 3)



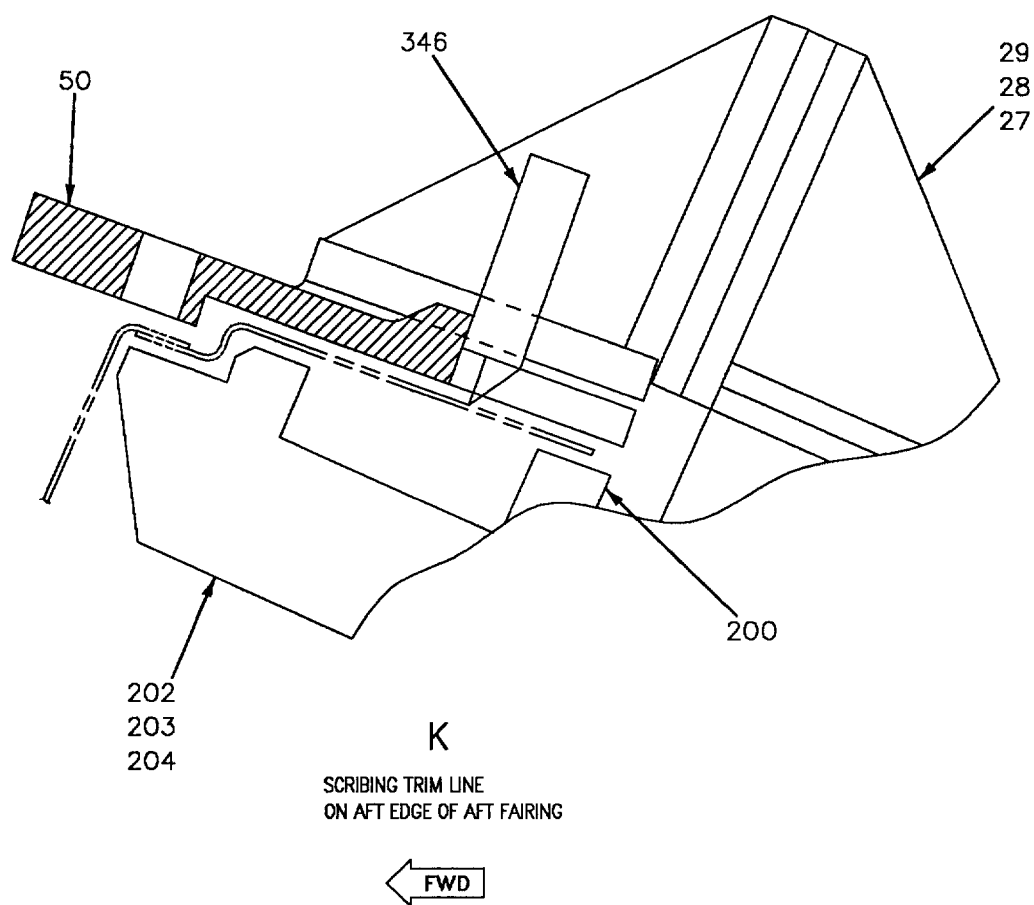
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Figure 43. Inspection or Replacement - Aft Fairing and Aft Bulkhead (Sheet 4)



06024305

Figure 43. Inspection or Replacement - Aft Fairing and Aft Bulkhead (Sheet 5)

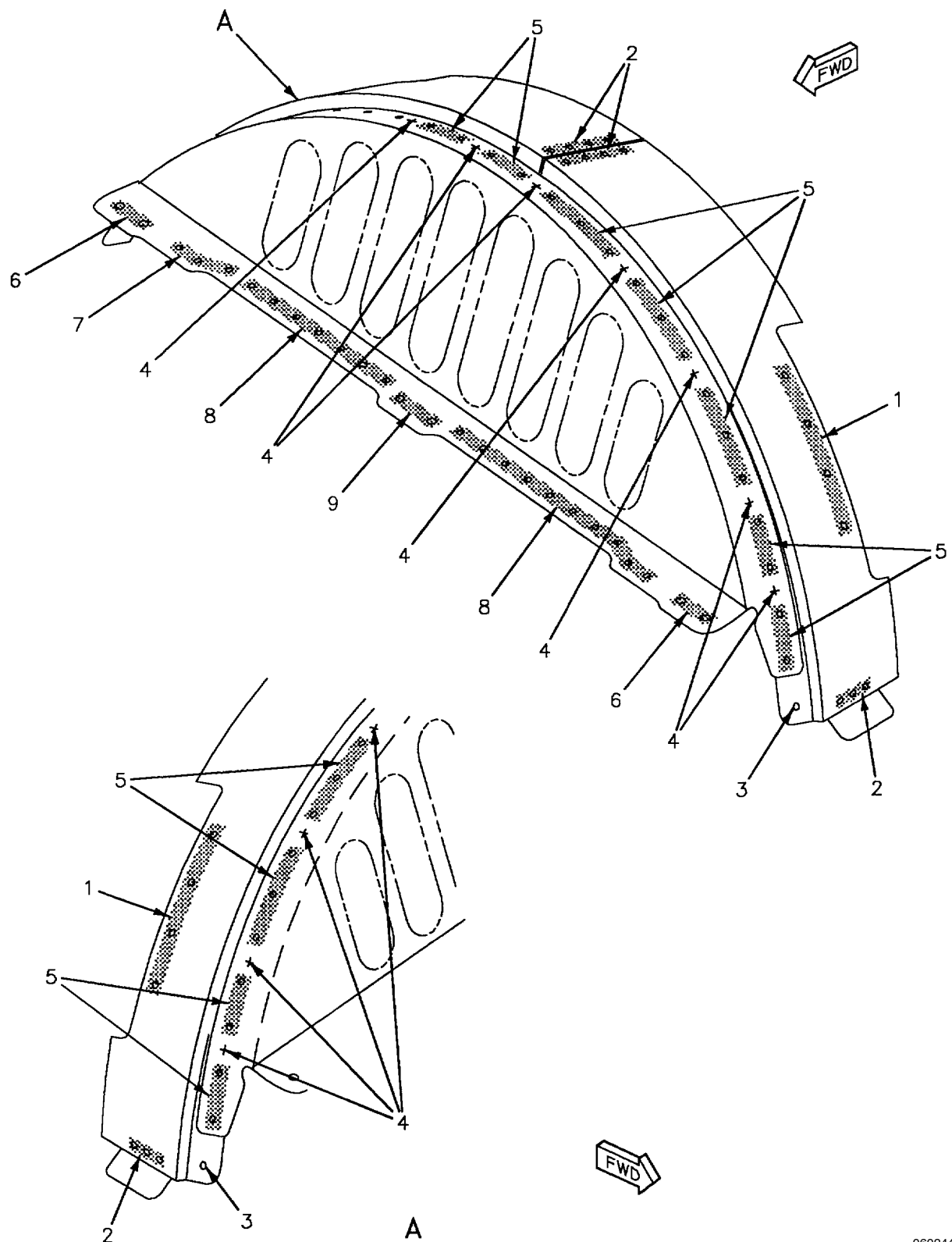


06024306

Figure 43. Inspection or Replacement - Aft Fairing and Aft Bulkhead (Sheet 6)



















DETAIL NO.	NAME	FUNCTION
C1	Traveler bushing	Guides 0.1285 inch diameter drill.
D1	Traveler bushing	Guides 0.161 inch diameter drill.
J1	Go, No-Go gage	To check minimum allowable line gap on aft edge of aft fairing.
T.F.I.M. 25.0202-142	Drill	Used to drill 0.161 inch diameter hole in aft fairing.
T.F.I.M. 25.0204-074	Drill	Used to drill 0.1285 inch diameter hole in aft bulkhead and aft fairing.
50	Drill blanket	Locates and drills attachment holes in aft fairing and aft bulkhead.
50C	Drill bushing	Guides traveler bushing (detail C1).
200	Canted plate	Provides mold line reference for aft fairing and attachment points for various locators.
201	Trim board	Provide trim line reference for inspecting or scribing aft edge trim line on aft fairing.
202	Slide locator	Used to inspect and locate aft fairing and aft bulkhead.
203	Slide locator	Used to inspect and locate aft fairing and aft bulkhead.
204	Slide locator	Used to inspect and locate aft fairing and aft bulkhead.
209	Hand knobs	Used to secure drill blanket (detail 50) to fixture.
260	Hand knobs	Used to secure trim board (detail 201) to fixture.
346	Scribe	Scribes trim line on aft fairing.
525	Go, No-Go gage	Checks for minimum allowable trim line gap on aft fairing.
526	Go, No-Go gage	Checks for minimum allowable trim line gap on aft edge of aft fairing.
555	L-pin	Used to locate trim board (detail 201).
556	L-pin	Used to locate slide locator (detail 202, 203, and 204).

Figure 43. Inspection or Replacement - Aft Fairing and Aft Bulkhead (Sheet 7)



06024401

Figure 44. Aft Fairing, 74A350825, and Aft Bulkhead 74A3508445, Fastener Index
(Sheet 1)

IDX NO.	EFT		NOMENCLATURE	PART NUMBER
1			Bolt	HT4024L3-2- 1
2			Rivet	BRFS5AD
3			Bolt Washer Washer Nut	NAS663V12HT AN960C10L AN960C19  NAS1291C3M
4			Rivet	BRFS4AD
5			Bolt Washer Nut	NAS663V10 AN960C10L NAS1291L3M
6			Pin Collar	HLT50YB-8-6 SW1000-8M
7			Pin Collar	HLT50YB-6-6 SW1000-6M
8			Pin Collar	HLT50YB-6-4 SW1000-6M
9			Bolt Washer Nut Retainer	AIC763-4-12 NAS1587-4C K50188-4 10695B4RET
<p style="text-align: center;">LEGEND</p> <p> Hole diameter is 0.195 +0.007 -0.000.</p> <p> Hole diameter is 0.1610 +0.0005 -0.0000.</p> <p> Hole diameter is 0.1285 +0.0055 -0.0000.</p> <p> Hole diameter is 0.2495 +0.0025 -0.0000.</p> <p> Hole diameter is 0.1895 +0.0025 -0.0000.</p> <p> Hole diameter is 0.250 +0.006 -0.000.</p> <p> Washer used under nut.</p> <p> Hole diameter is 0.255 +0.007 -0.000.</p>				

**Figure 44. Aft Fairing, 74A350825, and Aft Bulkhead, 74A350844, Fastener Index
(Sheet 2)**

DEPOT MAINTENANCE

STRUCTURE REPAIR

F/A-18B CANOPY TRANSPARENCY REMOVAL, INSTALLATION, AND REPLACEMENT

Reference Material

Maintenance Fixture, RE174350006, Loading F/A-18B Canopy	WP006 01
Aircraft Corrosion Control	A1-F18AC-SRM-500
Windshield, Canopy, and Cockpit Finish System	WP021 00
Structure Repair, General Information	A1-F18AC-SRM-200
Oversize Fasteners	WP004 07
Accessory Kits and Spray Mist Coolant Tank	WP004 16
Adhesive, Cement, and Sealant; Preparation and Application	WP011 00

Alphabetical Index

Subject	Page No.
Transparency, 74A350800, Removal and Installation	1
Installation	2
Removal	2

Record of Applicable Technical Directives

None

1. TRANSPARENCY, 74A350800, REMOVAL AND INSTALLATION. See figure 1.

Materials Required

Support Equipment Required		Materials Required	
Nomenclature	Part Number or Type Designation	Nomenclature	Specification or Part Number
Maintenance Fixture, Canopy, Two Place	RE174350006-1	Barrier Material	MIL-B-131, Class 1
Repair Kit, Canopy, Two Place	RE274350006-1	Cheesecloth	CCC-C-440, Type 1, Class 1
Torque Wrench, 0 to 50 Inch Pounds	-	Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108
Torque Wrench, 0 to 120 Inch Pounds	-	Isopropyl Alcohol	TT-I-735, Grade 1
		Methyl Ethyl Ketone	TT-M-261
		Primer, Adhesive	PR142
		Sealing Compound	PR-1725, B2
		Tape, Pressure Sensitive	A-A-883, Type 1, 1 inch

2. REMOVAL.



To prevent damage to transparency, be sure barrier material remains between transparency and ethyl foam.

- a. For preparation and loading of canopy (WP006 01).

NOTE

Forward or aft transparency may be removed individually or as an assembly. Retain 74A350822 splice plate on undamaged portion of transparency if removing individually.

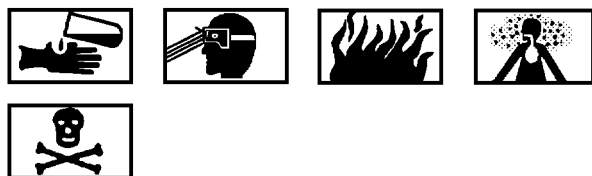
- b. Remove fasteners attaching transparency to canopy structure. See figure 2 for fastener location.

- c. Remove transparency from canopy and place in suitable holding fixture.



Use care when cleaning residual sealing compound from structure to prevent damage to 74A350006 silicone rubber strips.

- d. Clean all residual sealing compound from mating canopy structure using a plastic scraper.



Methyl Ethyl Ketone

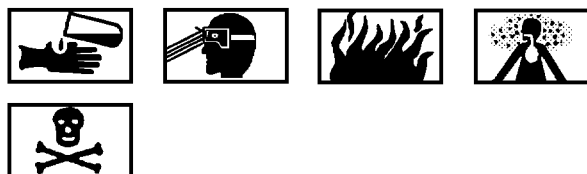
5

- e. Clean mating canopy structure with clean cheesecloth moistened with methyl ethyl ketone.

- f. Apply finish system as required (A1-F18AC-SRM-500, WP021 00).

3. INSTALLATION.

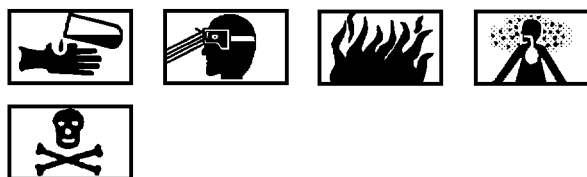
- a. Mask canopy structure next to surfaces being sealed using pressure sensitive tape.



Isopropyl Alcohol

2

- b. Clean all surfaces on transparency and mating canopy structure receiving sealing compound with cleaning cloth moistened with isopropyl alcohol.

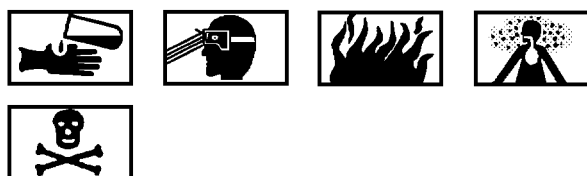


Adhesive Primer

19

- c. Brush apply one thin coat of adhesive primer to surfaces on transparency and mating canopy structure receiving sealant.

- d. Allow adhesive primer to air dry for a minimum of 15 minutes before applying sealing compound.



Sealing Compound

20

- e. Prepare sealing compound by mixing base component and accelerator to a weighed ratio of 100 parts base component to 10 parts accelerator.

- f. Thoroughly mix components until a uniform color appears.

- g. Install transparency, see figure 1:

- (1) Fay surface seal areas indicated (A1-F18AC-SRM-200, WP011 00).

- (2) Wet install fasteners, see figure 2 and (A1-F18AC-SRM-200, WP011 00).

(3) Fillet seal areas indicated (A1-F18AC-SRM-200, WP011 00).

h. Remove masking.

4. 74A350800 DAMAGED TRANSPARENCY REPLACEMENT. See figures 2 and 3.

Support Equipment Required

Nomenclature	Part Number or Type Designation
Aircraft Structure Repair Tool Kit	74D110325-1001
Drilling Machines Accessory Kit	RE574000002-1
Drill Jig, Transparency	74D110310-1001
Drill Motor, Variable Speed	No. 11 DPV-15DA-450/1250
Hydraulic Feed Drilling Machine, 800 RPM	74D110311-1001
Maintenance Fixture, Canopy, F/A-18B	RE174350006-1
Repair Kit, Canopy	RE274350006-1
Spray Mist Coolant Tank	RE874000002-1
Vacuum Cleaner	MIL-V-21987

Materials Required

Nomenclature	Specification or Part Number
Barrier Material	MIL-B-131, Class 1
Cushioning Material, Ethyl Foam	PPP-C-1752, Type 1, Class 2-400x12x108

a. Load canopy into fixture (WP006 01).

NOTE

Forward or aft transparency may be removed individually or as an assembly. Retain 74A350822 splice plate on undamaged transparency if removed individually.

b. Remove damaged transparency per paragraph 2, this WP.



To prevent damage to new transparency, make sure barrier material is installed between transparency and ethyl foam.

c. Position new transparency on mating canopy structure.

d. Assemble clamp half (details 92, 93) onto arch base (detail 105) eight places per steps below:

(1) Install clamp half (detail 92) from mold line side of arch base (detail 105), detail A.

(2) Install clamp half (detail 93) over clamp half (detail 92) and rotate to lock position, detail A.

e. Install drill blanket (details 16, 95) onto arch base (detail 105) by inserting L-pins (detail 112) and T-pin (detail 548) eight places, detail B.

f. Position drill blankets (details 73, 74) on fixture base (detail fig 192, 193) by inserting L-pins (detail 115) two places and secure by installing handknob (detail 296).

g. Position drill blanket (detail 71) on fixture base (detail 192, 193) by inserting L-pins (detail 115) six places and secure by installing handknobs (detail 296) six places.

h. Insert locator pin (detail 370) into drill blankets (detail 73, 74), typical two places, detail C.

i. Position new transparency net with locator pins (detail 370), detail C.



Excessive pressure on transparency by thumbscrews (details 131 and 547) can cause gouges, cracks, or distortion.

j. Tighten thumbscrews (detail 131) to secure forward transparency to 74A350801 arch eight places, detail A.

k. Tighten thumbscrews (detail 547) to secure aft transparency to canopy structure several places, detail D.

l. Position drill blankets (detail 78, 79) on fixture base (detail 192, 193) by inserting L-pins (detail 115) two places and secure by installing handknobs (detail 296) three places.

m. At forward transparency hole location 1 through 41 and 121 through 175:

(1) Install applicable traveler bushing (detail L1, M1, or N1) into existing holes in 74A350801 arch and 74A350822 splice, detail E.

(2) Mark location of any fastener hole drilled oversize.

(3) Back drill 0.1285 inch diameter pilot hole 0.100 inch deep using T.F.I.M. 25.0215-004 from RE274350006-1 canopy repair kit.

n. At forward transparency hole location 42 through 71, 75 through 80, and 120 left side and 81 through 110, 114 through 119, and 176 right side:

(1) Install applicable traveler bushing (detail L1, M1, or N1) into existing holes in 74A350814 side beam, detail F.

(2) Mark location of any fastener hole drilled oversize.

(3) Back drill 0.1285 inch diameter pilot hole 0.100 inch deep using T.F.I.M. 25.0215-004 from RE274350006-1 canopy repair kit.

o. At forward transparency hole location 72 through 74 and 111 through 113:

(1) Install applicable traveler bushing (detail V1, W1, or X1) into existing holes in 74A350814 side beam, detail F.

(2) Mark location of any fastener hole drilled oversize.

(3) Back drill 0.1770 inch diameter hole 0.100 inch deep using T.F.I.M. 25.0215-038 from RE274350006-1 canopy repair kit.

p. At aft transparency hole location 177 through 378:

(1) Install applicable traveler bushing (detail L1, M1, or N1) into existing holes in 74A350822 splice, 74A350814, side beam, and 74A350825 aft fairing, detail F.

(2) Mark location of any fastener hole drilled oversize.

(3) Back drill 0.1285 inch diameter pilot hole 0.100 inch deep using T.F.I.M. 25.0215-004 from RE274350006-1 canopy repair kit.

q. Remove drill blankets (detail 16, 71, 73, 74, 78, 79, and 95) and clamp half (details 92, 93).

r. Remove transparency.

s. Open back drilled holes full size, see view G:

(1) Position 74D110310-1001 transparency drill jig over 0.100 inch deep back drilled holes.

(2) Insert 0.1285 or 0.1770 inch diameter locating pin (detail 101, 102, part of 74D110310-1001 drill jig) into applicable back drilled holes and clamp in place.

(3) Remove locating pin.

(4) Insert coolant bushing (subassembly A, B, part of 74D110310-1001 drill jig) into 74D110310-1001 drill jig.

(5) Attach RE874000002-1 coolant tank assembly to coolant bushing.

(6) Peck drill pilot hole through transparency using 1000 RPM hand drill and T.F.I.M. 25.0215-004, T.F.I.M. 25.0215-038 from RE274350006-1 canopy repair kit.

(7) Remove coolant bushing (subassembly A, B) and RE874000002-1 coolant tank assembly.

(8) Install RE574000002-1 coolant bushing and nose piece (subassembly Y, Z, and detail 151) on 74D110311-1001 hydraulic feed drilling machine.

(9) Adjust feedrate to 1.5 inch/minute and dwell to 1 second.

(10) Install 74D110311-1001 hydraulic feed drilling machine to 74D110310-1001 drill jig.

(11) Attach RE874000002-1 coolant tank assembly to RE574000002-1 coolant bushing.

(12) Drill holes full size using applicable drill from RE274350006-1 canopy repair kit. See figure 2.

NOTE

Control depth of countersink by using microstop cage with 500 RPM drill motor. For equipment setup (A1-F18AC-SRM-200, WP004 16).

t. Countersink holes in mold line side of transparency to flushness requirement of fastener using T.F.I.M. 25.014-104 100° countersink cutter from 74D110325-1001 structure repair tool kit.

u. Install drill blankets (details 16, 95, 71, 73, 74, 78, and 79) per steps e through g and l.

v. At forward or aft transparency hole locations where back drilling was inaccessible:

(1) Insert centering scope (detail 527) through drill bushing, detail H.

NOTE

Numbers next to lines on centering scope (detail 527) indicate drill size required to clean up existing holes in canopy structure. Number 8 indicates nominal, number 3 indicates first oversize, number 1 indicates second oversize, and letter G indicates 1/4 oversize.

(2) Rotate centering scope (detail 527) to determine which line on centering scope is nearest to diameter of existing hole in canopy structure, detail H.

(3) Record hole location and drill size required to clean up each hole.

(4) Remove drill blankets (details 16, 71, 73, 74, 78, 79, and 95).

(5) Position transparency on canopy structure.

(6) Secure transparency by installing fasteners at various locations, figure 2.

(7) Install drill blankets (details 16, 95, 71, 73, 74, 78, and 79) per steps e through g and l.

(8) At hole locations in structure that align with drill blanket holes and require nominal size drilling:

(a) Insert subassembly C with quick disconnect coolant line attached to RE874000002-1 coolant tank assembly, detail J.

(b) Peck drill 0.1285 inch diameter pilot hole through transparency using T.F.I.M. 25.0215-004 from RE274350006-1 canopy repair kit.

(c) Open pilot holes to 0.195 +0.007 -0.000 inch diameter using RE574000002 bushing and nose piece with SPT274A350004-5001 TD from RE274350006-1 canopy repair kit, RE874000002-1 spray mist coolant tank, and 74D110311-1001 hydraulic feed drilling machine.

(9) At hole locations in structure that are misaligned with drill blanket holes and require oversize reaming:

(a) Insert subassembly C with quick disconnect coolant line attached to RE874000002-1 coolant tank assembly, detail J.

(b) Peck drill 0.1285 inch diameter pilot hole through transparency using T.F.I.M. 25.0215-004 from RE274350006-1 canopy repair kit.

(c) Open pilot hole to 0.195 +0.007 -0.000 inch diameter using RE574000002 bushing and nose piece with SPT274A350004-5001 TD from RE274350006-1 canopy repair kit, RE874000002-1 spray mist coolant tank, and 74D110311-1001 hydraulic feed drilling machine.

(d) Ream holes in transparency and canopy structure to required oversize diameter as determined by centering scope in step v using SPT6RE174350004, SPT7RE174350004, and SPT8RE174350004 step reamers from RE274350006 canopy repair kit and drill motor.

w. Remove drill blankets (details 16, 71, 73, 74, 78, 79, and 95).

x. Remove transparency.

y. Countersink hole in mold line side of transparency to flushness requirement of fastener using T.F.I.M. 25.014-104 100° countersink cutter from 74D110325-1001 structure repair tool kit and drill motor. For countersink sizes (A1-F18AC-SRM-200, WP004 16).

z. Vacuum area of all loose debris.

aa. Visually inspect each hole for flaws and repair holes containing any of the following conditions:

(1) Cracks or laminar splits.

(2) Frosted crazed surface typical of conditions resulting from drill flutes packed with chips.

ab. The following conditions may be visible but are not rejectable flaws:

(1) Helical rub marks from drill withdrawal which have no measurable depth.

(2) Countersink pilot rub marks which have no measurable depth.

(3) Minor surface crazing that covers less than one third of the hole surface.

ac. Install new transparency on canopy structure per paragraph 3, this WP.

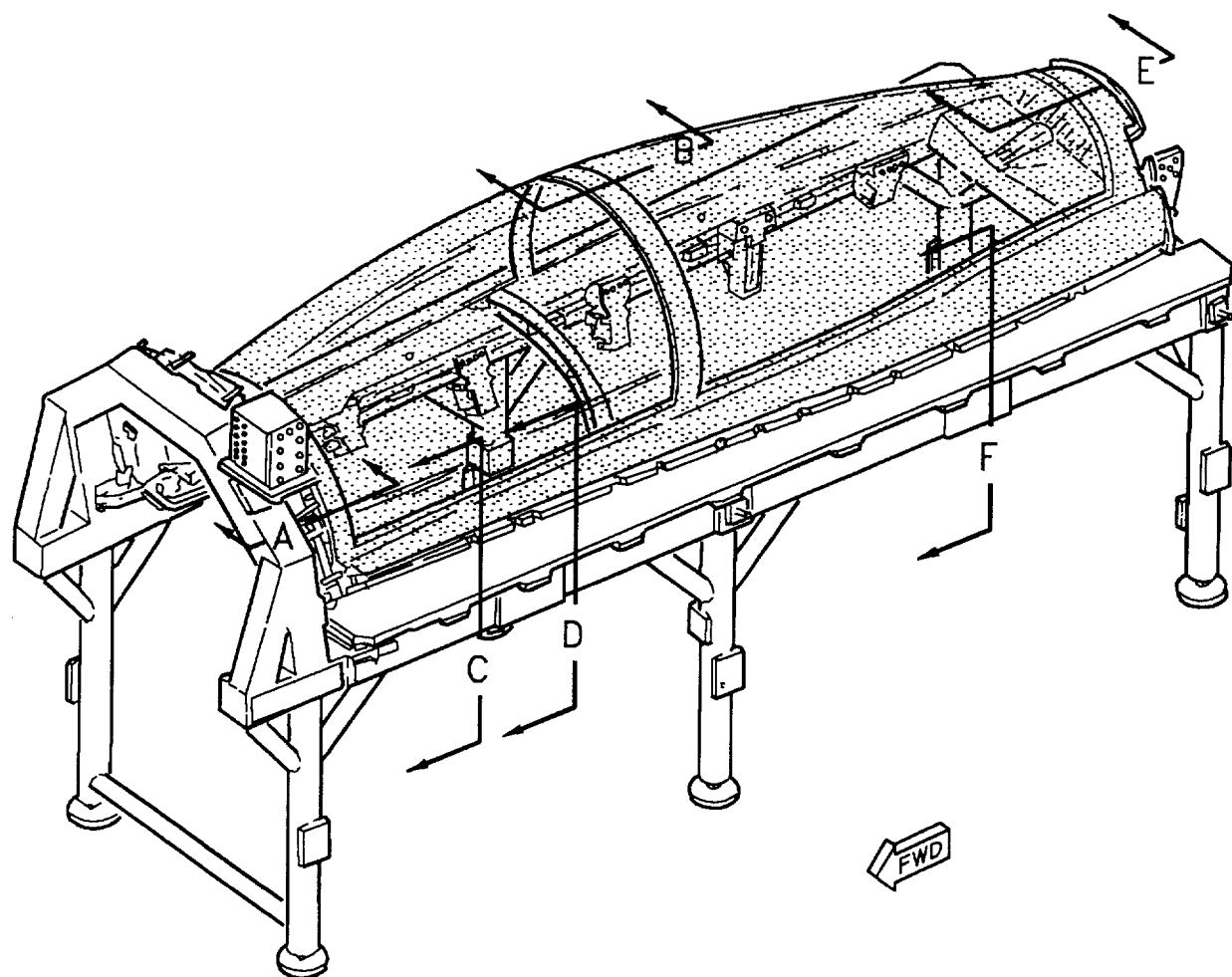


Figure 1. Transparency Removal and Installation (Sheet 1)

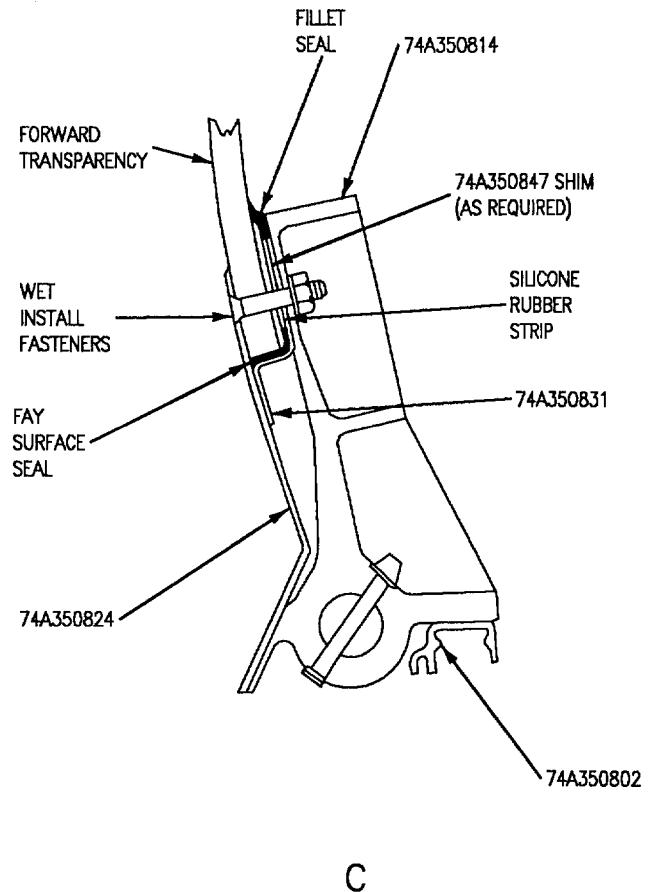
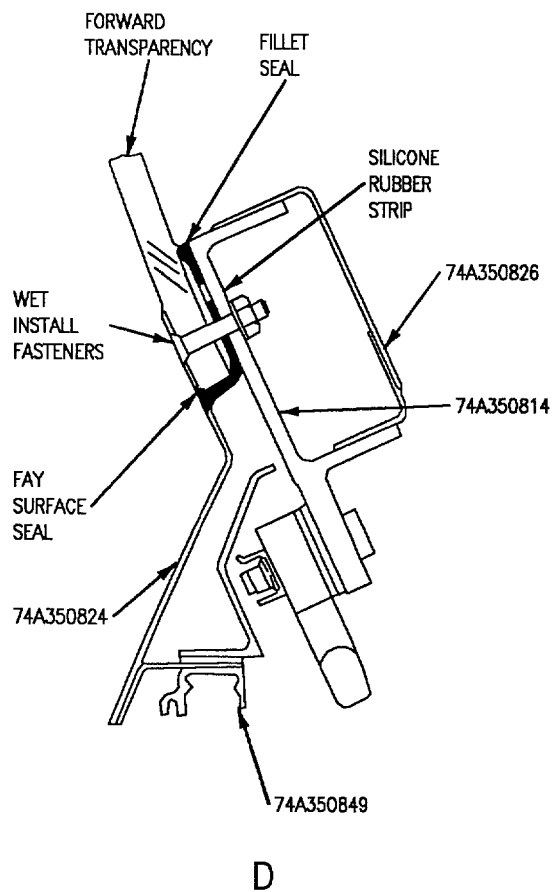
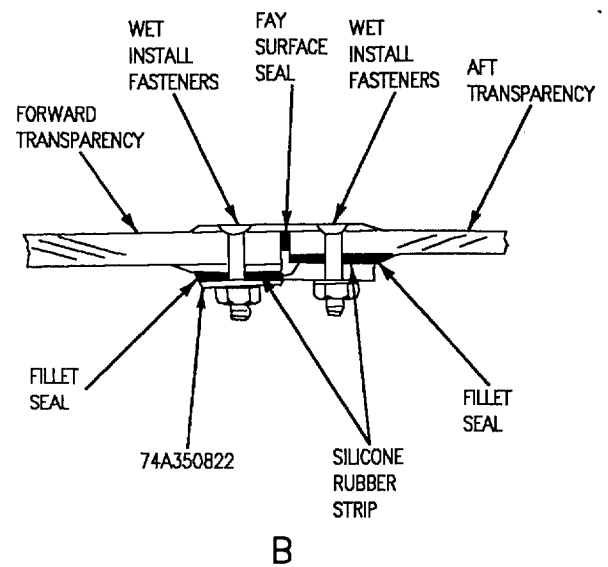
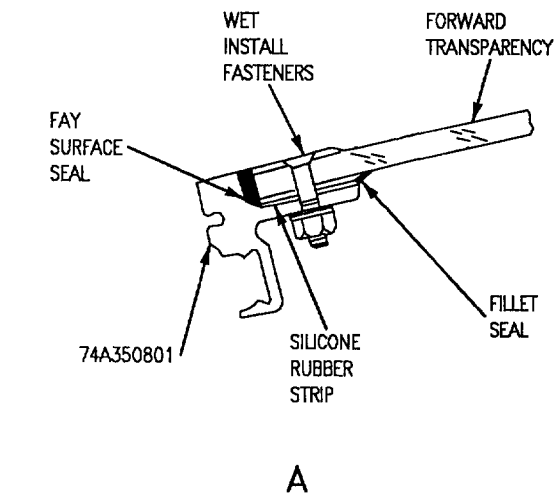


Figure 1. Transparency Removal and Installation (Sheet 2)

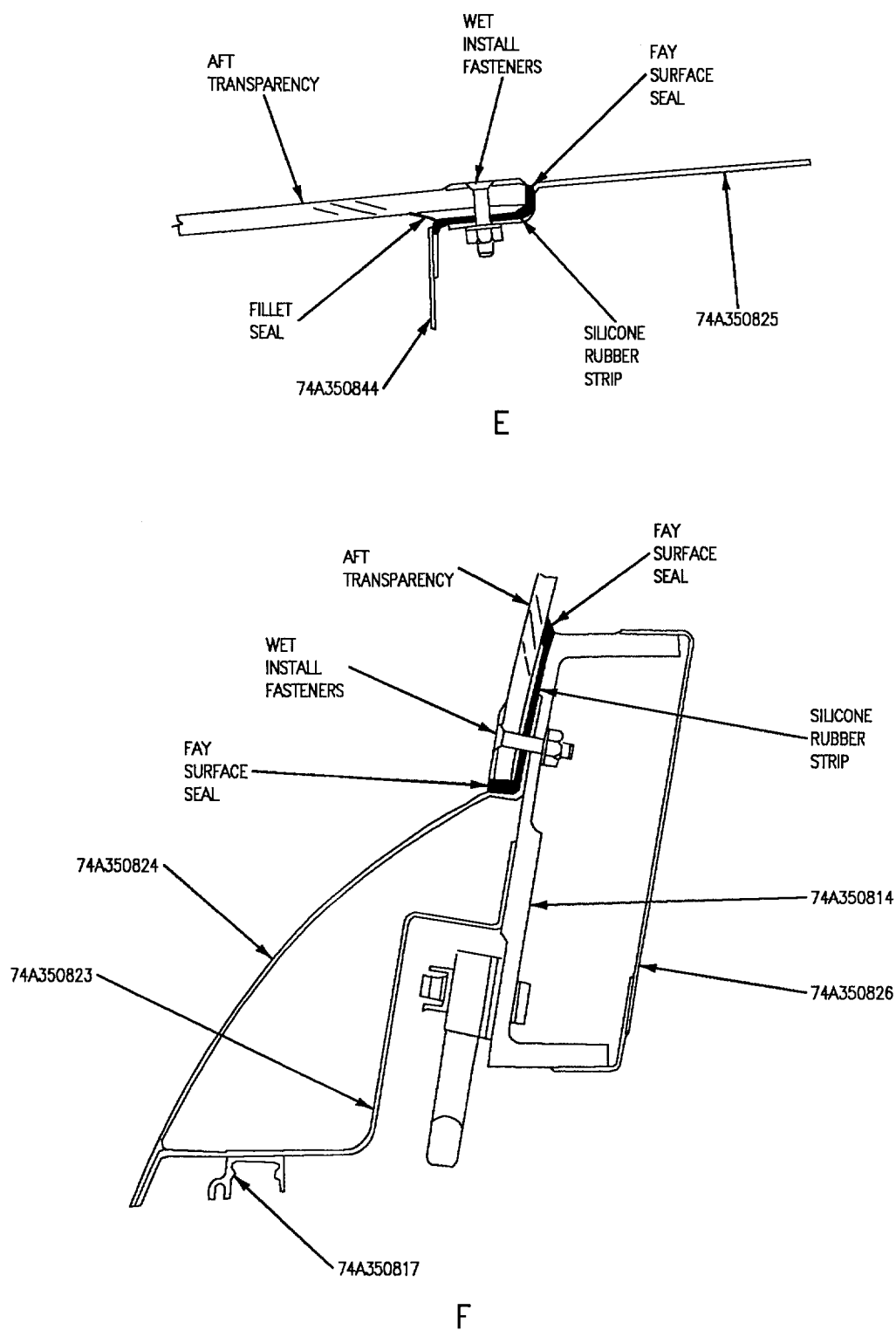


Figure 1. Transparency Removal and Installation (Sheet 3)

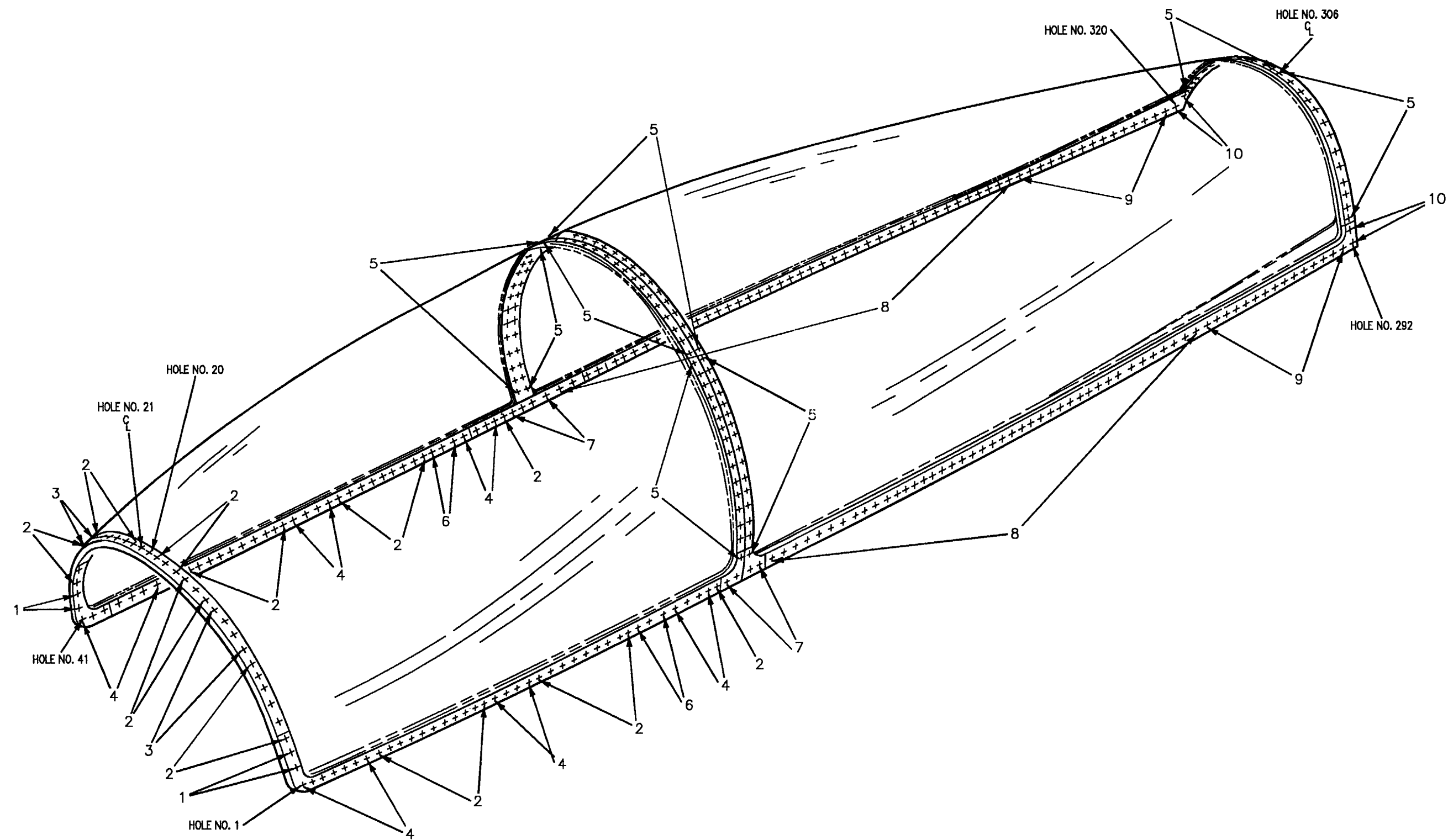


Figure 2.

Figure 2. Transparency, 74A350800, Fastener Index (Sheet 1)

Figure 2.

INDEX NO.	HOLE NO.	QTY	HOLE SIZE	DRILL NO.	FASTENER 1	WASHER	SPACER BUSHING	RETAINER 2
1	2, 3, 39, 40	4	0.195 +0.007 -0.000		NAS663V13HT	AN960C10		NAS1291C3M
2	3	69	0.195 +0.007 -0.000		NAS663V11HT 12	AN960C10L AN960C10		NAS1291C3M
3	4	8	0.195 +0.007 -0.000		NAS663V11HT	AN960C10L		NAS1291C3M
4	5	30	0.195 +0.007 -0.000		NAS663V11HT	AN960C10		NAS1291C3M
5	6	135	0.195 +0.007 -0.000		NAS663V10HT	AN960C10L		NAS1291C3M
6	7	6	0.255 +0.007 -0.000		NAS664V12HT			13
7	8	8	0.195 +0.007 -0.000		NAS663V12HT	AN960C10		NAS1291C3M
8	9	84	0.195 +0.007 -0.000		NAS663V10HT 12	AN960C10L AN960C10		NAS1291C3M
9	10	30	0.195 +0.007 -0.000		NAS663V10HT	AN960C10		NAS1291C3M
10	11	4	0.195 +0.007 -0.000		NAS663V12HT 12	AN960C10L AN960C10		NAS1291C3M
<p style="text-align: center;">LEGEND</p> <p>1 For oversize repair fasteners, see (A1-F18AC-SRM-200, WP004 07).</p> <p>2 Torque nut 15-20 inch lbs.</p> <p>3 Hole numbers 4 thru 9, 14 thru 28, 33 thru 38, 48 thru 58, 63 thru 71, 79, 87 thru 97, 102 thru 110, 118.</p> <p>4 Hole numbers 10 thru 13, 29 thru 32.</p> <p>5 Hole numbers 1, 41 thru 47, 59 thru 62, 75 thru 78, 81 thru 86, 98 thru 101, 114 thru 117.</p> <p>6 Hole numbers 121 thru 175, 178 thru 232, 294 thru 318.</p> <p>7 Hole numbers 72 thru 74, 111 thru 113.</p> <p>8 Hole numbers 80, 119, 120, 176, 177, 233, 234, 378.</p> <p>9 Hole numbers 235 thru 276, 336 thru 377.</p> <p>10 Hole numbers 277 thru 291, 321 thru 335.</p> <p>11 Hole numbers 292, 293, 319, 320.</p> <p>12 Install AN960C10 washer under nut.</p> <p>13 Torque 45-60 inch lbs.</p>								

Figure 2. Transparency, 74A350800, Fastener Index (Sheet 2)

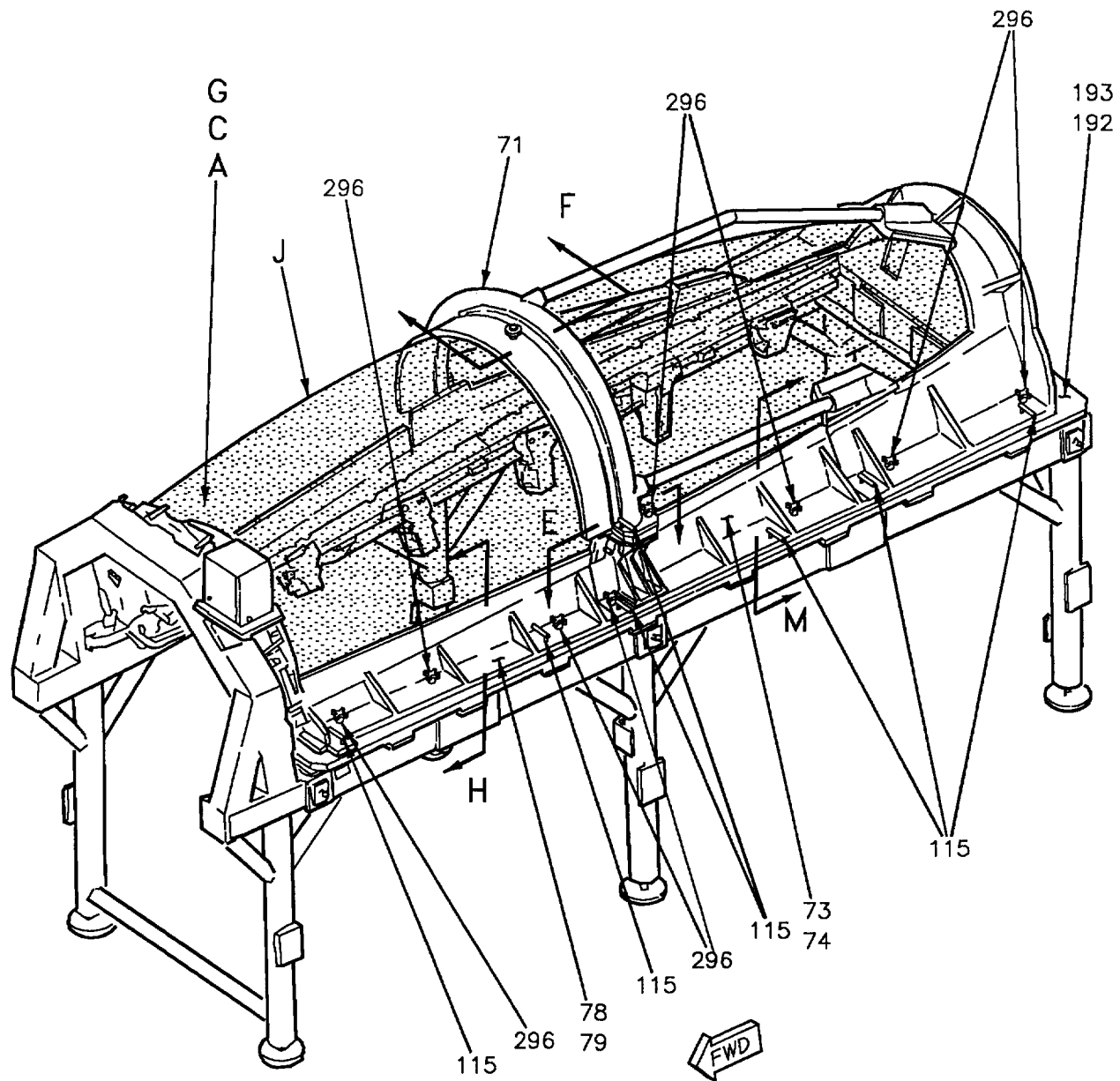


Figure 3. Damaged Transparency Replacement (Sheet 1)

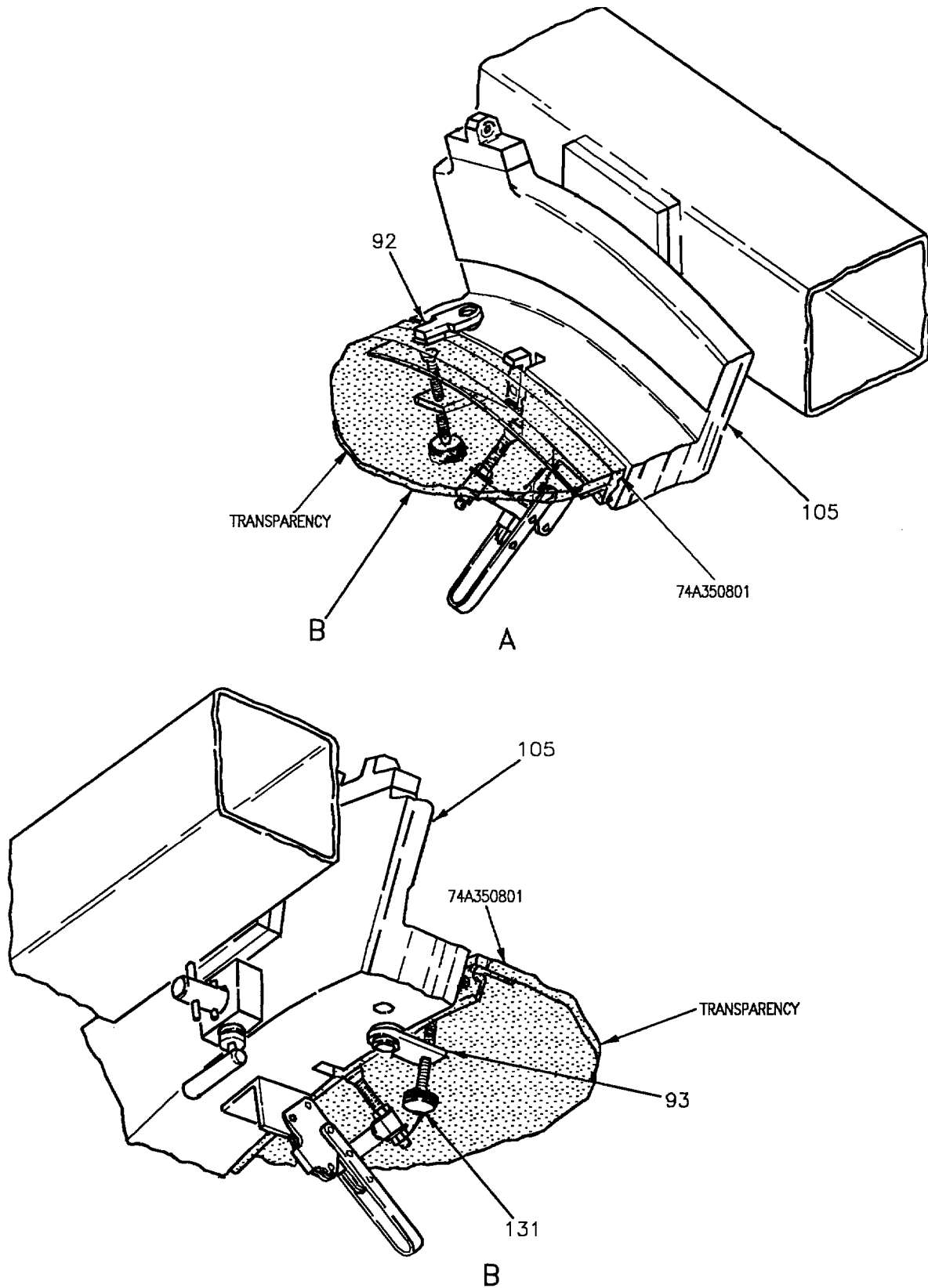


Figure 3. Damaged Transparency Replacement (Sheet 2)

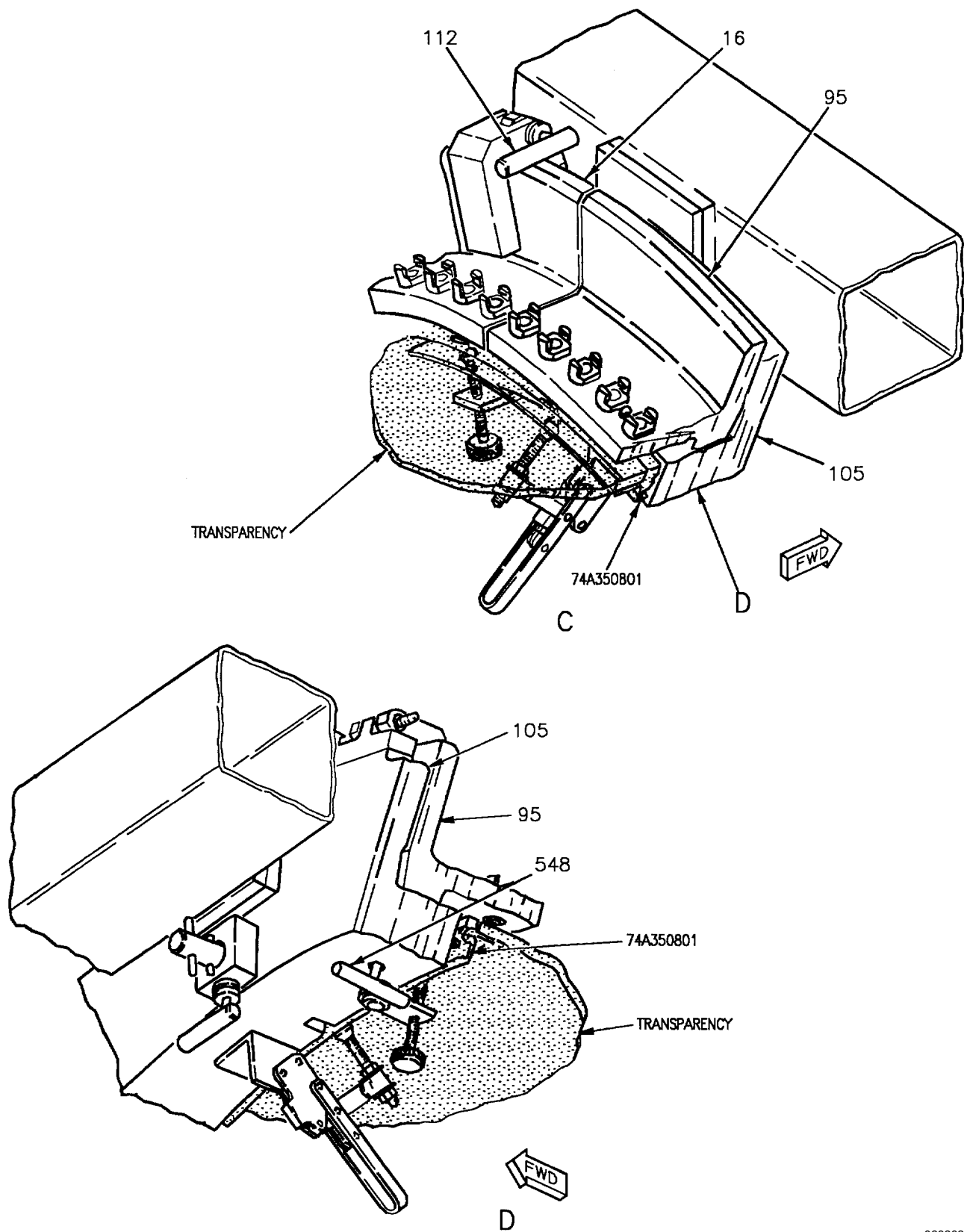


Figure 3. Damaged Transparency Replacement (Sheet 3)

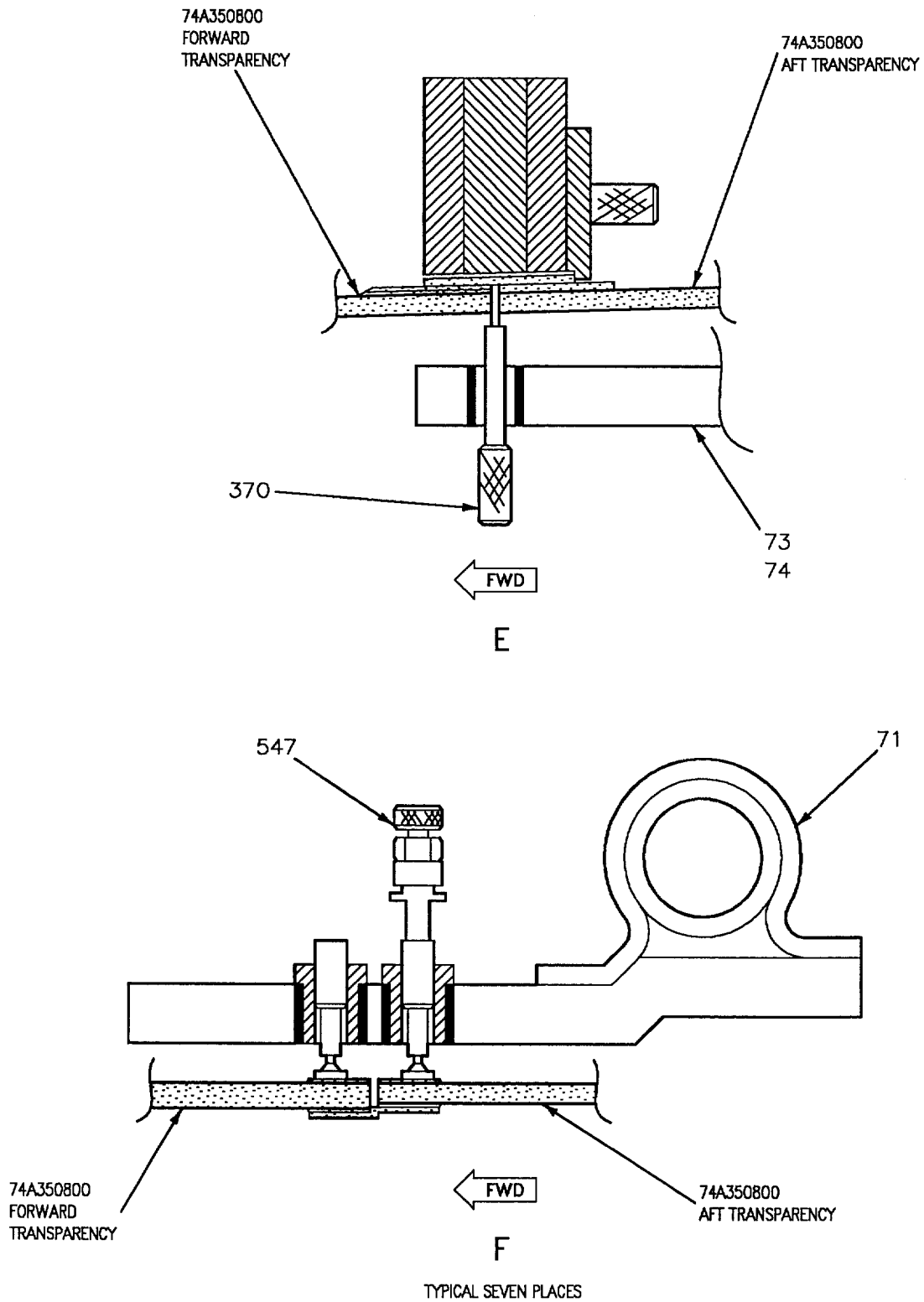


Figure 3. Damaged Transparency Replacement (Sheet 4)

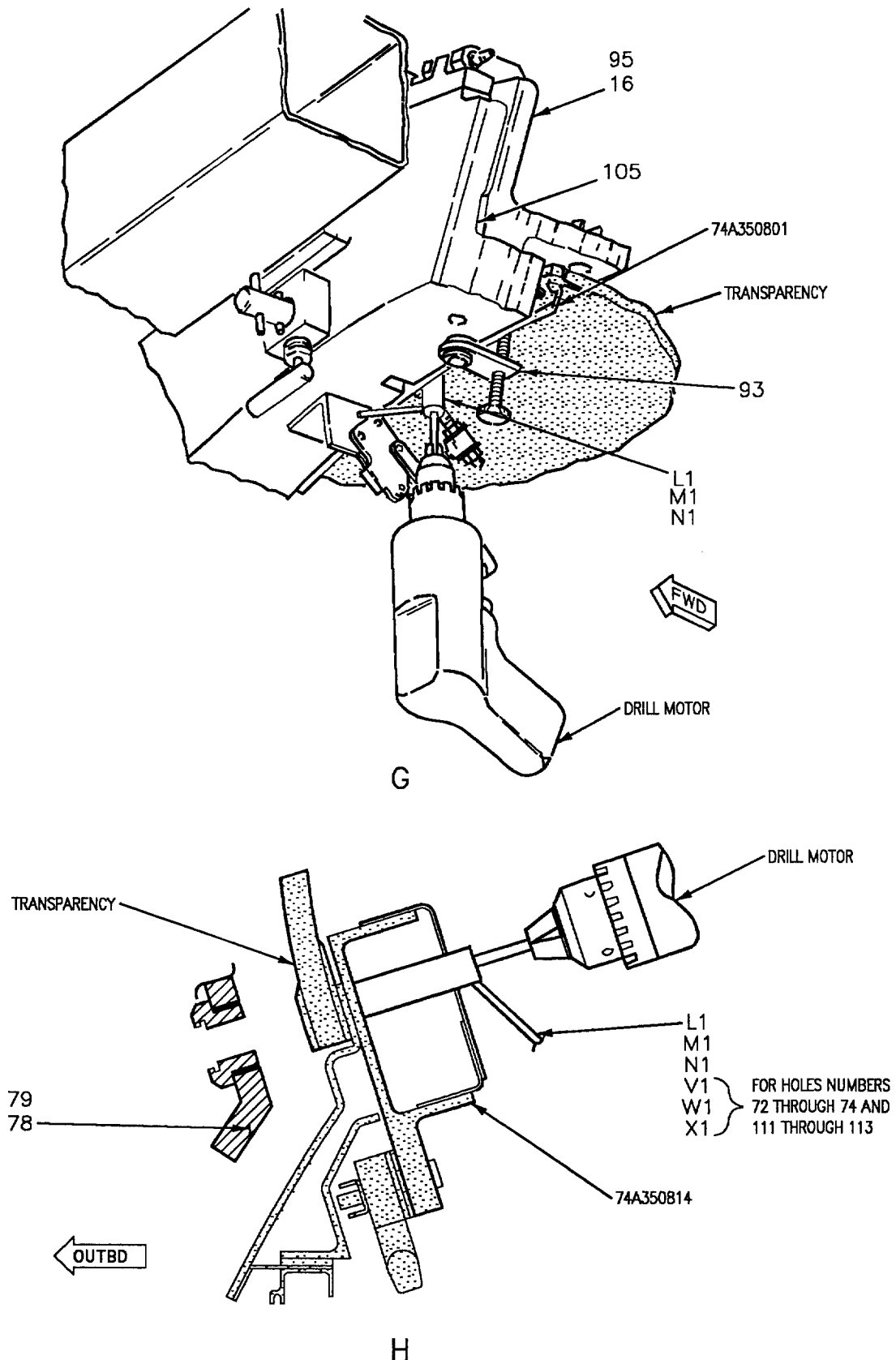


Figure 3. Damaged Transparency Replacement (Sheet 5)

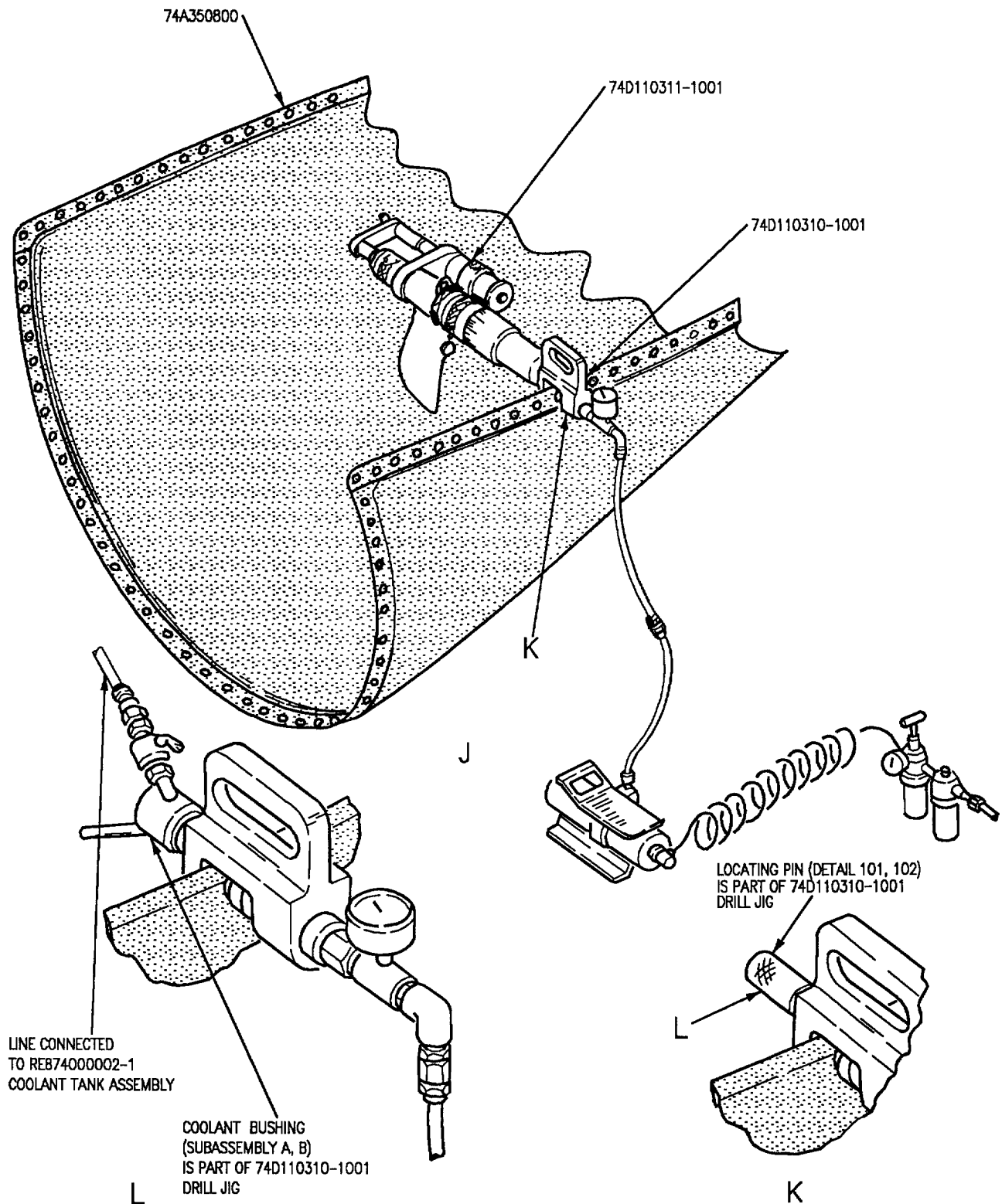


Figure 3. Damaged Transparency Replacement (Sheet 6)

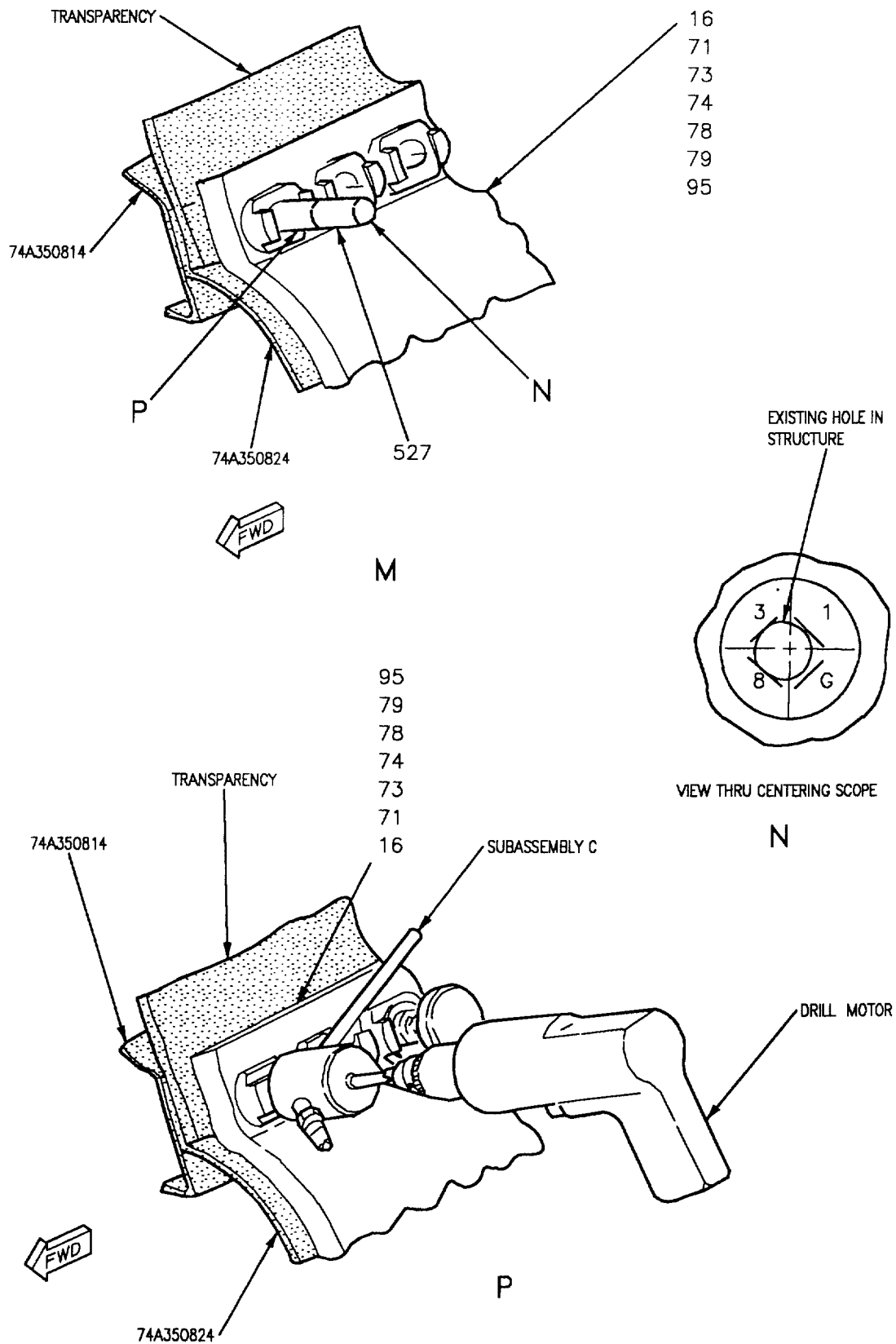


Figure 3. Damaged Transparency Replacement (Sheet 7)

DETAIL NO.	NAME	FUNCTION
Subassembly C	Traveler bushing	Guides 0.1285 inch diameter drill.
L1	Traveler bushing	Guides 0.1285 inch diameter drill in nominal size hole.
M1	Traveler bushing	Guides 0.1285 inch diameter drill in first oversize hole.
N1	Traveler bushing	Guides 0.1285 inch diameter drill in second oversize hole.
V1	Traveler bushing	Guides 0.1770 inch diameter drill in nominal size hole.
W1	Traveler bushing	Guides 0.1770 inch diameter drill in first oversize hole.
X1	Traveler bushing	Guides 0.1770 inch diameter drill in second oversize hole.
16, 95	Drill blanket	Locates transparency attachment holes at canopy arch for drilling procedures.
71	Drill blanket	Locates transparency attachment holes at canopy splice place, side beam and aft fairing for drilling procedures.
73, 74	Drill blanket	Locates transparency attachment holes at side beam for drilling procedures.
78, 79	Drill blanket	Locates transparency attachment holes at side beam for drilling procedures.
92, 93	Clamp half	Assembles through arch base (detail 105) to provide clamping capabilities for support of transparency to canopy structure.
105	Arch base	Contains various details for clamping, inspecting and locating canopy arch 74A350801.
112	L-pin	Locates and secures drill blankets (details 16, 95) to arch base (detail 105).
115	L-pin	Locates and drill blankets (details 71, 73, 74, 78, and 79) to fixture base (detail 192, 193).
131	Thumbscrew	Part of clamp half (detail 93). Secures transparency to canopy arch.
192, 193	Fixture base	Base of fixture to which locators mount.
296	Handknob	Secures drill blankets (details 71, 73, 74, 78, and 79) to fixture base (detail 192, 193).
370	Locator pin	Locates forward and/or aft transparency.

Figure 3. Damaged Transparency Replacement (Sheet 8)

DETAIL NO.	NAME	FUNCTION
527	Centering scope	Used with drill blankets (details 16, 71, 73, 74, 78, 79, and 95) to determine hole size required to clean up holes not able to be back drilled.
547	Thumbscrew	Secures aft transparency to canopy structure.
548	T-pin	Locates and secures drill blankets (details 16, 95) to arch base (detail 105).

Figure 3. Damaged Transparency Replacement (Sheet 9)